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DEPARTMENT OF LIVESTOCK
Animal Health Division
Helena, Montana 59620

1982
NOVEMBER - DECEMBER
MONTHLY LETTER

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WE RUINED 1982

This is the November newsletter that hopefully will get out before the end of December.

Somehow the days or weeks seem to get shorter, or something. I know they don't put as many days in a year as they used to when I was a kid. Anyway, they sure seem to go by a lot faster now, or else maybe I'm not conscious as much as I used to be.

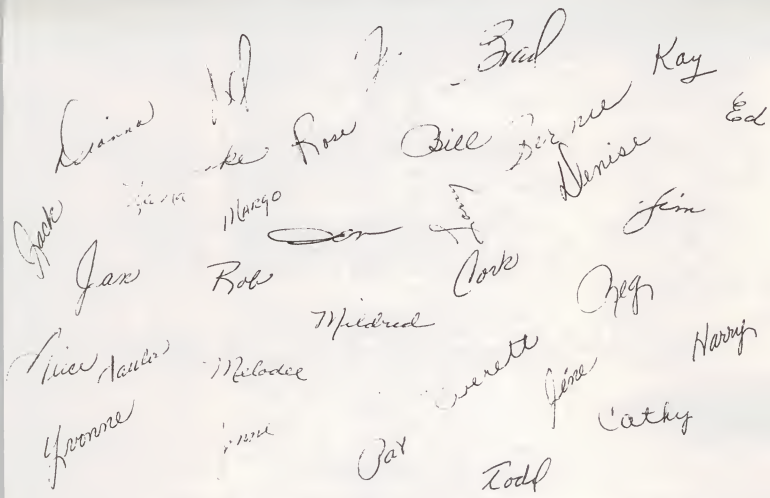
We've gotten into the first part of December and I don't remember where George Washington's Birthday and Thanksgiving went, or if we had summer this year. Possibly they occurred without my permission.

At any rate, the year has sped past without benefitting many people, it sure hasn't helped the cow business or the grain business or the business business, but it is the best year we've had in 1982.

The Holidays are with us again and hopefully we're all among our loved ones and are able to see many things for which we are thankful.

Our best wishes to you all and may you have a Merry Christmas and a Happy New Year.

From the staff at the Animal Health Division.



RABIES

The following counties have been released from rabies quarantine: Beaverhead and Valley Counties.

MINNESOTA PERMIT REQUIREMENTS

Minnesota requires a permit for feeding heifers between 6 and 18 months of age. Minnesota makes this request because apparently some veterinarians are using the old 8 months of age provision that was their original rule.

THIS ARTICLE HAS NOTHING TO DO WITH BRUCELLOSIS

For a refreshing change, I thought it would be nice to discuss a new subject, so I've chosen one that should have universal appeal, if you happen to like girls.

I got off on a tangent yesterday after reading a small item in the 10/14/82 edition of the Montana Crop and Livestock Reporter, concerning "World Beef Trade".

The article states that historically five countries supply the U.S. with the largest share of beef imports primarily in the form of 90% lean, fresh or frozen, boneless beef. Australia was the largest contributor to that total in 1981, by exporting nearly 568 million pounds of product worth $566 million to the U.S.

Now hesitate a moment and put all these pounds of boneless beef back on to a carcass or carcasses and you are going to have a whale of an animal or a whale of a number of animals.

Using a U.S. slaughter type steer as an example, we can form an idea of the number of head of cattle represented. (This reasoning is already erroneous since the bulk of Australian beef sent to this country is grass fat commercial grade). But anyway, with our U.S. type beef steer.--

A thousand pound steer should yield a carcass weighing right at 610 pounds. Then bone and trim that carcass and you will lose about 18% of the carcass weight, so you end up with about 500 pounds of boneless beef, if my old fashioned pencil math is correct. This works out to about 50% of the live weight.

All right, now double that 568 million pounds and you arrive at 1,136,000,000 pounds, then divide by 1000 (weight of one steer) and you end up with 1,136,000 head of cattle. This represents the number of cattle slaughtered in Australia, alone, to export to the U.S.

In the same article it states that New Zealand, as second highest exporter to the U.S., ships us 341 million pounds of the same type product, which by the same tortured reasoning means 682,000 head of cattle additional.

All told, Australia and New Zealand kill roughly 1.8 million head of cattle to send to the U.S.

Now there are other countries in the world that send U.S. beef, in competition to our own industry's production, so that import figures represent 4-8 percent of total beef production and consumption. In recent years this figure has been increasing, reaching a high of 10% in 1979. The "trigger level" is 1.3 billion pounds above which import quotas are levied.

Because this amount of import directly affects the ability of the U.S. beef industry to market our domestically produced beef, something needs to be done about further limiting those imports.

Do all U.S. industries have to be destroyed by foreign competition before we decide that we have to be a little protectionist, i.e., the steel and automobile industries, electronics, etc.?

Just think what our own cattle market could be if there were less outside competition.

Montana, whose largest industry is agriculture, and whose largest segment of agriculture is livestock, could be again a highly active ranching community producing homegrown beef for homegrown consumption.

It's rather frightening to consider that only the U.S. can consistently produce an agricultural surplus to feed the world and our own government works actively to destroy our ability to produce with their naive "cheap food" policy.

Where are we going to get a consistent supply of the quality of food that we are used to when our own agriculture is shot? I for one don't look forward to a diet of fish heads and rice.

There now, that's all of this tirade, but as an afterthought -- you were suckered into reading this whole diatribe just because you wanted to see how I was going to bring up the subject of girls. Yours is the prurient interest, not mine.

B.F.N.

TRICHOMONIASIS

Recently there have been several reports of Trichomonas infection in cattle in several locations in the state. Probably the most extensive involvement includes a grazing association in Southwestern Montana.

This disease can be devastating due to the effect it has on fertility and breeding. Clinically, Trichomoniasis may result in early embryonic death and abortion and pyometra. One of the most evident signs may be a low calving percentage. After breeding to a bull, cows may skip an estrus period or two and then return to heat. This is due to embryonic death.

Because it is a venereally transmitted disease, Trichomoniasis may occur after the introduction of new cattle, especially nonvirgin bulls, or exposure in a community pasture situation.

Signs may be early fetal death, return to heat after 1-2 cycles, later abortion, pyometra and poor conception rates. At pregnancy test time nonpregnant cows may account from 5-40% of exposed animals.

After going through several estrous cycles cows may become immune and rid themselves of the infection. Then usually replacement heifers and added cows are the only casualties. When this occurs, many times an owner considers that he can live with the disease.[1]

As a result of this attitude reproductive efficiency declines and profits are continually drained unless steps are taken to free the herd from this infection.

Because the bulls are a mechanical carrier of the protozoan Trichomonas fetus inflammatory signs in the prepuce are not commonly seen.

Diagnosis is made by demonstration of T. fetus in genital materials collected from either sex. Isolation of the organism in an animal should constitute a herd diagnosis and control measures should be instituted.

Vibriosis must be considered in a differential diagnosis as should IBR, BVD, and Leptospirosis.

Key to control of the disease is management of bulls. In range conditions, all bulls can be tested prior to breeding season and only young noninfected bulls should be turned out with cows. It has been found that young bulls under four years of age tend to be refractory to infection with Trichomonas.

Infected cows should have three estrus periods without breeding, then if the uterus is palpated normal she may be bred with reasonable assurance that she is free of T. fetus infection. Clean cows should be bred separately to clean bulls.

Artificial insemination is preferred as a means of breaking the infection cycle, but if this is impractical then a young bull should be selected with the view that he likely will only be used one season.

As cows are confirmed pregnant by palpation they can then be transferred to the clean bunch. When the number of infected cows diminishes sufficiently, the remaining infected females should be sold to slaughter only. They should never be allowed to return to breeding status because of the obvious danger of reinfecting a clean herd.

Any cows that return to estrus or abort should be reexamined immediately and placed back in the infected group, if necessary.

Usually with consistent and careful management a herd can be restored to its normal reproductive efficiency.

Treatment is expensive and must be considered as a long term project. Most bulls, unless they are extremely valuable, would best be sent to slaughter.

As in the case of a grazing association or other community pasturing situation, all owners should be made aware of the problem and the necessary measures that must be taken to clear the matter.

In Montana, Trichomonas is a reportable disease but it is not quarantined. Like many other diseases, knowledge of its presence puts a veterinarian in a precarious position, especially when asked to write health certificates or to attest to salability of a herd.

Caution and good practice precepts must be exercised.

In horses, Trichomas fecalis (T. equi.) was considered as a cause of equine diarrhea but it is no longer considered to be of any significance.

It is true that the organism can be found in the intestinal content of some cases, but it is considered to be the result of the altered physical and chemical composition of the gut content rather than a cause of the change.

The accepted association in other species and foals between rota virus, corona virus and diarrhea suggests the possibility in adult horses.

1 - Howard, J. L., Current Veterinary Therapy Food Animal Practice. (1981)
2 - Blood, D. C.; Henderson, J. A., Radostets, O.M., Veterinary Medicine, 1979. Fifth edition.

ADDENDUM TO TRICHOMONIASIS ARTICLE

The above article on "Trich" was written prior to my going to the USAHA meeting in early November and prior to seeing Dr. Bill Quinn's fine article in the Montana Farmer Stockman.

There seems to be a considerable resurgence of interest in Trichomoniasis both in Montana and other areas of the Northwest. At the USAHA meeting, representatives from Oregon, California, Idaho and Montana all discussed recent problems with the disease in their respective states.

I'm not sure that there is as much a real increase in Trichomonas infection in cattle as there is a real increase in diagnosis of infection in cattle.

Old chronic infertility and nonconception problems have been with us all along and in many cases a diagnosis of the etiology was never made, only a

process of elimination by vaccination. When the reproductive problem got to a low enough level that an owner was willing to tolerate that number of late or dry cows, attempts at diagnosis were dropped.

Also, some veterinarians fail to consider an old etiology that isn't the current disease-of-the-month as a possible source of their problems.

There are methods of solving the problem and they all involve close contact and cooperation between the practitioner and his client in management of an infected herd.

One of the contributing problems with all infectious diseases is the mobility of the affected population. And as we all know, most of the cattle in the West put on more miles on the highway before they are three years old than Honest Wilbur, the used cow trader, does on his Lincoln Continental in the same period.

So gird your loins, sally forth and diagnose Trichomoniasis until something more popular comes along.

HEMOPHILUS SEROLOGY

****

The Diagnostic Laboratory is now set up to perform Hemophilus serology. A paired serum sample is required for serological diagnosis. Collect and freeze at least 2 ml of clear serum. DO NOT FREEZE WHOLE BLOOD. After 2 to 3 weeks, collect a convalescent sample and send both samples to the laboratory on form SV 2 A.

A single sample, regardless of titer, will be reported out as undetermined, since we do not know the diagnostic significance of antibodies to Hemophilus.

The charge will be $2.00 for the first sample and $1.00 for each subsequent sample that is submitted on the same SV 2 A form.

TRICHOMONIASIS

****

A recent laboratory diagnosis of bovine infertility and abortion due to Trichomonas fetus revealed a few things that could prove helpful to you in attempting to make a similar diagnosis.

1. Do not refrigerate or freeze uterine exudate or aborted fetuses prior to examination.

2. Submit to the laboratory as soon as possible.

3. The organisms are visible using standard light microscopy, but are more easily identified by dark-field microscopy.

The Trichomonads are extremely fragile and are more likely to remain viable at moderate temperatures (55^{o} - 70^{o} F). However, even at reasonable temperatures these organisms gradually die making it essential to get the sample to the laboratory as soon as possible; preferably within forty-eight (48) hours. The number of organisms present will determine your success using light microscopy. A small number may be overlooked, making culture in specific media extremely important when none are detected by direct exam.

I. Accessions received in August 1982:

		SEROLOGY ACCESSIONS
BOVINE	77	351
EQUINE	64	213
PORCINE	10	0
OVINE	8	3
FELINE	53	7
CANINE	91	2
AVIAN	11	0
WILDLIFE	135	5
MISC.	16	9
TOTAL	465	590

II. Serology

A. Brucellosis (all species) total sera -- 4,140 sera; 5 positive
   1. Brucellosis routine tests -- 2,669 sera
   2. Quarantine herd tests -- 138 sera
   3. Slaughter samples -- 1,333 sera; 5 positive
   4. Seminal plasma - Brucellosis -- 0

B. Brucellosis CF tests -- 24

C. Leptospirosis (all species) -- 109 sera
   1. L. pomona -- 3 positive
   2. L. hardjo -- 5 positive
   3. L. icterohemorrhagia -- 1 positive
   4. L. grippotyphosa -- 1 positive
   5. L. canicola -- 4 positive
   6. L. tarassovi -- 2 positive

D. Bluetongue -- 180 sera; 120 positive

E. Anaplasmosis -- 354 sera; 14 positive

F. IBR -- 68 sera; 6 positive

G. BVD -- 81 sera; 9 positive

H. PI_3 -- 20 sera; 3 positive

I. BLV -- 7 sera; all negative

J. EIA -- 359 sera; 3 positive

K. Pseudorabies -- 149 sera; Slaughter -- 149; all negative

L. Feline Leukemia Virus -- 7 sera; 6 positive

M. Mare Pregnancy Test -- 38 sera; 20 positive

III. Bacteriology

A. Total -- 132 accessions processed resulting in 211 isolates.
B. Antibiotic sensitivities were run on 189 isolates.
C. Salmonella typhimurium -- bovine case

IV. Electron Microscopy
A. Bovine -- 2 samples negative
B. Equine -- 1 sample negative
C. Canine -- 1 sample -- parvovirus

V. Virology

A. Virus isolation attempts
1. Bovine -- 9 cases; all negative
2. Porcine -- 5 cases; 4 negative, 1 undetermined
B. Fluorescent antibody tests
1. IBR -- 5 negative
2. BVD -- 13; 2 undetermined
C. Leptospirosis cultures--1 canine, negative

VI. Pathology
A. 160 accessions
B. 369 slides from 798 tissues
C. 29 gross necropsies

VII. Rabies examinations

A. 212 requests
1. Human exposure
a. 2 positive (bats - Jefferson and Missoula counties)
b. 63 negative
2. No human exposure
a. 14 positive
1. 12 bats (Cascade (2), Lincoln, Missoula, Wheatland, Custer(2)
Judith Basin, Lewis and Clark, Gallatin (2), Flathead)
2. 2 skunks (Dawson and Beaverhead counties)
b. 133 negative

RABIES EXAMINATIONS
****

AUGUST

	POSITIVE HUMAN EXPOSURE	POSITIVE NO HUMAN EXPOSURE	NEGATIVE HUMAN EXPOSURE	NEGATIVE NO HUMAN EXPOSURE	TOTAL SPECIMENS
Bovine				1	1
Equine				1	1
Ovine			1		1
Feline			28	13	41
Canine			24	4	28
Wildlife and other					
Bat	2	12		86	100
Coyote			1		1
Ferret			1	2	3
Fox				1	1
Mink				3	3
Mole			1		1
Mouse			2		2
Rabbit				2	2
Raccoon			1	3	4
Skunk		2	2	14	18
Squirrel			1		1
Weasel			1	2	3
Woodchuck				1	1
TOTAL	2	14	63	133	212

I. Accessions received in September 1982:

		SEROLOGY ACCESSIONS
BOVINE	99	412
EQUINE	59	291
PORCINE	15	9
OVINE	7	5
FELINE	47	9
CANINE	124	4
AVIAN	7	0
WILDLIFE	108	2
MISC.	11	2
TOTAL	477	734

II. Serology

A. Brucellosis (all species) total sera -- 7,221; 2 positive
   1. Brucellosis routine tests -- 3,940 sera; 1 positive
   2. Quarantine herd tests -- 0
   3. Slaughter samples -- 3,280 sera; 1 positive
   4. Seminal plasma - Brucellosis -- 1 negative

B. Brucellosis CF tests -- 42

C. Leptospirosis (all species) -- 69 sera
   1. L. pomona -- 5 positive
   2. L. hardjo -- 6 positive
   3. L. icterohemorrhagia -- 2 positive
   4. L. grippotyphosa -- 5 positive
   5. L. canicola -- 3 positive
   6. L. tarassovi -- 2 positive

D. Bluetongue -- 108 sera; all negative

E. Anaplasmosis -- 86 sera; 2 positive

F. IBR -- 56 sera; 0 positive

G. BVD -- 61 sera; 3 positive

H. PI_3 -- 12 sera; 3 positive

I. BLV -- 8 sera; all negative

J. EIA -- 524 sera; 1 positive

K. Pseudorabies -- 150 sera; all negative-Routine -- 57; Slaughter -- 93

L. Feline Leukemia Virus -- 13 sera; 4 positive

M. Mare Pregnancy Test -- 27 sera; 10 positive

III. Bacteriology

A. Total -- 137 accessions processed resulting in 144 isolates.
B. Antibiotic sensitivities were run on 124 isolates.
C. Salmonella sp. -- bovine case
D. Campylobacter fetus ss. fetus -- cervical mucus (3)

IV. Electron Microscopy

A. Bovine -- 3 samples; 1 Vesicular Stomatitis Virus
B. Equine -- 2 samples negative
C. Porcine -- 3 samples negative
D. Canine -- 3 samples; 1 Parvovirus

V. Virology

A. Virus isolation attempts
    1. Bovine -- 21 cases; 1 BVD
    2. Porcine -- 4 cases; all negative
    3. Ovine -- 1 case; negative
B. Fluorescent antibody tests
    1. IBR -- 3; 1 positive
    2. BVD -- 8; 1 positive
    3. PPV -- 4 negative
    4. TGE -- 2 negative

VI. Pathology

A. 196 accessions
B. 415 slides from 1121 tissues
C. 38 gross necropsies

VII. Rabies examinations

A. 164 requests
    1. Human exposure
        a. 0 positive
        b. 46 negative
    2. No human exposure
        a. 14 positive
            1. 11 bats (Hill, Musselshell (2), Gallatin, Cascade (2), Lincoln, Lewis and Clark, Madison, Carbon and Flathead counties)
            2. 3 skunks (Dawson, Toole and McCone counties)
        b. 104 negative

RABIES EXAMINATIONS
****

SEPTEMBER

	POSITIVE HUMAN EXPOSURE	POSITIVE NO HUMAN EXPOSURE	NEGATIVE HUMAN EXPOSURE	NEGATIVE NO HUMAN EXPOSURE	TOTAL SPECIMENS
Bovine			2	3	5
Equine				1	1
Feline			23	4	27
Canine			11	5	16
Wildlife and Other					
Bat		11	2	66	79
Goose			1		1
Mink				1	1
Mouse			1		1
Muskrat				6	6
Porcupine				2	2
Rabbit			3	1	4
Raccoon				3	3
Rat			1	1	2
Shrew			1		1
Skunk		3		10	13
Squirrel				1	1
Weasel			1		1
TOTAL	0	14	46	104	164

DIAGNOSTIC LABORATORY NEWS
****

I. Accessions received in October 1982:

		SEROLOGY ACCESSIONS
BOVINE	105	653
EQUINE	46	237
PORCINE	14	19
OVINE	5	2
FELINE	48	8
CANINE	103	4
AVIAN	6	
WILDLIFE	37	9
MISC.	12	12
TOTAL	376	944

II. Serology

A. Brucellosis (all species) total sera -- 18,928; 2 positive
   1. Brucellosis routine tests -- 12, 854 sera
   2. Quarantine herd tests -- 0
   3. Slaughter samples -- 6,071 sera; 2 positive
   4. Seminal plasma - Brucellosis -- 3 negative

B. Brucellosis CF tests -- 9

C. Leptospirosis (all species) -- 150 sera
   1. L. pomona -- 10 positive
   2. L. hardjo -- 5 positive
   3. L. icterohemorrhagia -- 5 positive
   4. L. autumnalis -- 1 positive

D. Bluetongue -- 345 sera; 16 positive

E. Anaplasmosis -- 103 sera; 2 positive

F. IBR -- 45 sera; 1 positive

G. BVD -- 63 sera; 1 positive

H. PI_3 -- 33 sera; 7 positive

I. BLV -- 23 sera; negative

J. EIA -- 292 sera; negative

K. Pseudorabies -- 253 sera; all negative - Routine -- 143; Slaughter--110

L. Feline Leukemia Virus -- 8 sera; 3 positive

M. Mare Pregnancy Test -- 11 sera; 6 positive

III. Bacteriology

A. Total -- 134 accessions processed resulting in 95 isolates.
B. Antibiotic sensitivities were run on 74 isolates.
C. Salmonella dublin -- bovine case
D. Trichomonas foetus -- bovine cervical mucus

IV. Electron Microscopy

A. Bovine -- 2 samples; 1 Vesicular Stomatitis Virus
B. Equine -- 1 sample negative
C. Canine -- 2 samples negative

V. Virology

A. Virus isolation attempts
1. Bovine -- 22 cases; 1 BVD, 1 PI_3
2. Porcine -- 10 cases; 1 PI_3
3. Ovine -- 2 cases; 1 PI_3
4. Bison -- 1 case negative

VI. Pathology

A. 169 accessions
B. 355 slides from 851 tissues
C. 43 gross necropsies

VII. Rabies examinations

A. 99 requests
1. Human exposure
a. 0 positive
b. 41 negative
2. No human exposure
a. 1 positive (skunk - Daniels county)
b. 57 negative

RABIES EXAMINATIONS
****

OCTOBER

	POSITIVE HUMAN EXPOSURE	POSITIVE NO HUMAN EXPOSURE	NEGATIVE HUMAN EXPOSURE	NEGATIVE NO HUMAN EXPOSURE	TOTAL SPECIMENS
Bovine			2		2
Feline			25	7	32
Canine			9		9
Wildlife and Other					
Bat				9	9
Coyote				2	2
Fox				1	1
Mink			1		1
Mole			1		1
Mouse				1	1
Muskrat			1	5	6
Raccoon				5	5
Rat			1		1
Skunk		1	1	25	27
Squirrel				2	2
TOTAL		1	41	57	99

VETERINARIAN'S ANIMAL DISEASE REPORT
OCTOBER 1982

Beaverhead County

	Disease	Cases	Herds
Cattle	Urolithiasis	1	1
Dogs	Parvo-Virus	1	1
Horses	Influenza	3	2

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Big Horn County

	Disease	Cases	Herds
Sheep	Contagious Ecthyma	14	1

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Blaine County

	Disease	Cases	Herds
Cattle	Cancer Eye	4	3

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Carbon County

	Disease	Cases	Herds
Cattle	Bovine Respiratory Disease	15	2

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Carter County

	Disease	Cases	Herds
Horses	Strangles	2	1

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Cascade County

	Disease	Cases	Herds
Dogs	Parvo-Virus	2	2

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Veterinarian's Animal Disease Report

Chouteau County

	Disease	Cases	Herds
Cattle	Urolithiasis	1	1

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Custer County

	Disease	Cases	Herds
Dogs	Parvo-Virus	2	2

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Dawson County

	Disease	Cases	Herds
Cattle	Cancer Eye	8	6
Horses	Encephalomyelitis	1	1

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Deer Lodge County

	Disease	Cases	Herds
Dogs	Parvo-Virus	5	5

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Fallon County

	Disease	Cases	Herds
Cattle	Foot Rot	1	1
Dogs	Parvo-Virus	2	2
Horses	Strangles	3	2

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Flathead County

	Disease	Cases	Herds
Cattle	Cancer Eye	1	1
Dogs	Parvo-Virus	2	2

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Veterinarian's Animal Disease Report

Gallatin County

	Disease	Cases	Herds
Cattle	Pulmonary Emphysema	5	1
Dogs	Parvo-Virus	5	5
Horses	Strangles	1	1
Sheep	R.E.O.	4	2

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Garfield County

	Disease	Cases	Herds
Sheep	Contagious Ecthyma	52	1

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Lewis & Clark County

	Disease	Cases	Herds
Cats	Fe Leuk	5	5
Cattle	Pulmonary Emphysema	14	1
Dogs	Parvo-Virus	10	9
Horses	Strangles	2	1
Sheep	R.E.O.	15	3

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Madison County

	Disease	Cases	Herds
Dogs	Parvo-Virus	1	1
Horses	Strangles	1	1

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McCone County

	Disease	Cases	Herds
Cattle	Pulmonary Emphysema	1	1
Horses	Strangles	7	4

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Veterinarian's Animal Disease Report

Missoula County

	Disease	Cases	Herds
Cattle	Shipping Fever	13	2
Dogs	Parvo-Virus	10	10
Horses	Strangles	6	3
Swine	Erysipelas	1	1

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Musselshell County

	Disease	Cases	Herds
Cattle	Bovine Respiratory Disease	2	1

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Richland County

	Disease	Cases	Herds
Horses	Infectious Rhinopneumonitis	3	2

* * * * * * * * * * *

Rosebud County

	Disease	Cases	Herds
Cattle	Vesicular Stomatitis	100	15
Dogs	Parvo-Virus	2	2
Horses	Vesicular Stomatitis	30	18

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Sanders County

	Disease	Cases	Herds
Horses	Encephalomyelitis	1	1

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Silver Bow County

	Disease	Cases	Herds
Cattle	Cancer Eye	10	4
Dogs	Parvo-Virus	6	6

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Treasure County

	Disease	Cases	Herds
Cattle	Vesicular Stomatitis	43	3
Horses	Vesicular Stomatitis	39	17

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Valley County

	Disease	Cases	Herds
Cattle	Cancer Eye	11	3
Dogs	Distemper	2	2
Horses	Strangles	1	1

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Yellowstone County

	Disease	Cases	Herds
Cattle	Foot Rot	23	7
Horses	Influenza	7	1

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TOTAL CASES AND HERDS	1,201	371

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STATE OF MONTANA
DEPARTMENT OF LIVESTOCK
Animal Health Division
Helena, Montana 59620

[Monthly Letter, MT Dept of Livestock

1982
OCTOBER
MONTHLY LETTER

Board of Livestock

Robert G. Barthelmess, Chairman...Miles City
Nancy Espy.....Boyes
Elmer Flynn.....Missoula
Donald L. Herzog.....Rapelje
John Kelly.....Red Lodge
Ralph J. Parker.....Fort Shaw
Robert M. Simons.....Turner

JAMES W. GLOSSER, D.V.M.
Administrator
&
State Veterinarian

VESICULAR STOMATITIS

Since the last mention of VS in the Newsletter, several other states, including Montana, have experienced outbreaks of the disease.

Our problem is centered almost entirely in the Billings to Forsyth to Hardin triangle and cases have been confirmed in the Laboratory at Ames in both cattle and horses. We have one report, but no clinical or laboratory confirmation, in sheep.

Our first confirmed case was reported by Dr. Gerry Killen of Forsyth. Veterinarians located in Hardin, Worden, Forsyth and Billings (the whole area) have been the main line in coping with the problem. Both Dr. Pribanic, USDA, (Foreign Animal Disease Diagnostician) and Dr. Ferrell, USDA, have worked closely in this outbreak.

This Department would like to thank all the veterinarians (practitioners, State and Federal) for their alert and professional dedication.

This again demonstrates, in my estimation at least, how heavily the livestock industry must rely on that practicing veterinarian, out in the brush, to be alert for possible dangers through disease threats.

But after all, isn't that why we're all here in large animal practice! other than trying to make a living.

At times it gets a little disheartening to work in disease control and find how little is actually known or done with a particular situation.

At point, is this current outbreak. Our first notification of this epizootic was via the "moccasin telegraph" in a conversation with Dr. Jim Schoenfeld of Utah in early August. Then with further inquiry to our Federal Veterinarian, he informed us that he had to inquire of his counterparts for information.

After some investigation, our V.I.C. reported that "yes" there was an epizootic in the making and the Federal government was forming a task force in Colorado to contend with the disease.

We sent Dr. Ferlicka to Colorado as our Foreign Animal Disease Diagnostician representative with the federal task force where he was able to get some fine firsthand experience. The major drawback to the whole affair was an APHIS test exercise with, yes, you guessed it, Vesicular Stomatitis, that interfered with combatting the real thing.

One of the other major disadvantages seems to be the dearth of information available on the disease. It would seem that a disease that is as important as is VS, in the differential diagnosis of Foot and Mouth Disease, would have been studied more intensively than it has been.

Here is a fine subject to which some researcher could devote his time. Besides being of importance as far as Foot and Mouth is concerned, it is a fascinating virus to follow.

The notification system between Federal and State leaves much to be desired in this case also. Realizing that there is no program, other than differentiation from Foot and Mouth, it seems that if for no other reason, courtesy dictates that there be timely notification of states as to the identity and extent of an outbreak of a disease. During this situation at least two State Veterinarians did not get official notification from the Feds.

Just because the Federal government is not involved does not mean that a disease does not cause economic impact on the livestock industry.

So far, horses, cattle (both beef and dairy), sheep, foxes, dogs, and humans have been affected with VS in various states.

Colorado, New Mexico, Utah, Wyoming, Idaho, Nebraska, and Montana have had reported cases of Vesicular Stomatitis. Arizona is questionable from what we can find out and Texas has been unfairly accused of having cases.

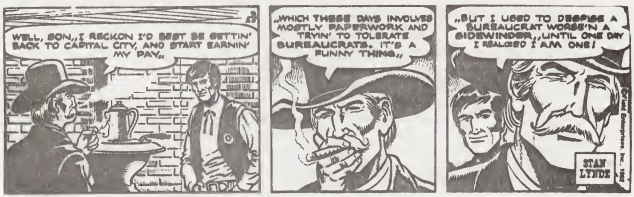
One wonders, is the procedure for handling an outbreak of Foot and Mouth identical to this?

If so, pity our poor livestock industry.

o!# BUREAUCRATS!

This cartoon strip of Latigo by Montana's Stan Lynde expresses my personal feeling better than I could myself. Any resemblance between that of Hood, the old Marshall, and any living character is strictly intentional on my part, not Mr. Lynde's.

Reproduced by Permission - Field Enterprises, 1982.


WELL, SON,, I RECKON I'D BEST BE GETTIN' BACK TO CAPITAL CITY, AND START EARNIN' MY PAY,,
„WHICH THESE DAYS INVOLVES MOSTLY PAPERWORK AND TRYIN' TO TOLERATE BUREAUCRATS. IT'S A FUNNY THING,,
„BUT I USED TO DESPISE A BUREAUCRAT WORSE'N A SIDEWINDER,,UNTIL ONE DAY I REALISED I AM ONE!
STAN LYNDE

LATIGO

Thanks, Mr. Lynde.

B.F.N.

RABIES QUARANTINES

Dr. Ferlicka has informed me that Sheridan, Roosevelt, Judith Basin, and Richland Counties have been removed from rabies quarantine.

Quarantine has been placed on Toole County.

SUBMITTING RABIES SPECIMENS

In the past several weeks the laboratory has received several bats for rabies examination that were still alive!

Please euthanize all specimens prior to shipment.

When contacted about this, one submitting veterinarian stated he didn't like to subject his employees to unnecessary risk in euthanizing a bat.

He didn't seem to think about exposing our employees to unnecessary risk in opening his specimen containers!

REDUCED DOSAGE ON BRUCELLA VACCINE

Heifer vaccination time is upon us once more and, as in the past two falls, you are to use the reduced dose in all heifers.

The latest viability counts we have are listed below for various serials of vaccines.

The correct procedure for official vaccination is:

1. Administer the vaccine (after proper dilution).
2. Tattoo the right ear.
3. Place vaccination tag in right ear. (Vaccination tags are orange and have a number such as 81VXX1234. Only vaccination tags letter series begins with V--.)
4. Complete SV-64 Calf Vaccination Certificate and send one copy to the Helena office.

Serial	Exp. Date	MFG.	Size Bottle	Count	Dilutent Added to Reconstituted Vaccine
600	10/03/82	J-S	5 Dose	21×10^9	325cc to 25cc recon.vac.
605	3/09/83	J-S	1 Dose	19×10^9	58cc to 5cc recon.vac.
603	3/22/83	J-S	5 Dose	20×10^9	308cc to 25cc recon.vac.
613	5/31/83	J-S	1 Dose	37×10^9	118cc to 5cc recon.vac.
611	5/17/83	J-S	5 Dose	32×10^9	505cc to 25cc recon.vac.
15091	3/18/83	H-L		12×10^9	175cc to 25cc recon.vac.

Some earlier dilutions are on file at the lab and in the Helena office.

Veterinarian's Animal Disease Report

Fallon County

	Disease	Cases	Herds
Cattle	Cancer Eye	1	1

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Flathead County

	Disease	Cases	Herds
Dogs	Parvo-Virus	2	2
Horses	Strangles	3	3

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Lewis & Clark County

	Disease	Cases	Herds
Horses	Strangles	1	1

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Lincoln County

	Disease	Cases	Herds
Cattle	I.B.R.	1	1
Dogs	Parvo-Virus	1	1
Horses	Strangles	4	3
Sheep	Enterotoxemia	2	2

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Madison County

	Disease	Cases	Herds
Cattle	Pulmonary Emphysema	4	1
Dogs	Infectious Hepatitis	1	1
Horses	Strangles	6	1

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Meagher County

	Disease	Cases	Herds
Horses	Strangles	1	1

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Veterinarian's Animal Disease Report

Missoula County

	Disease	Cases	Herds
Cattle	Pink Eye	3	1

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Park County

	Disease	Cases	Herds
Dogs	Parvo-Virus	7	7
Horses	Strangles	11	4

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Ravalli County

	Disease	Cases	Herds
Dogs	Parvo-Virus	10	10

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Richland County

	Disease	Cases	Herds
Dogs	Parvo-Virus	6	6

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Rosebud County

	Disease	Cases	Herds
Cattle	Urolithiasis	1	1
Dogs	Parvo-Virus	4	4
Horses	Strangles	6	2
Poultry	Infectious Bronchitis	120	1

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Silver Bow County

	Disease	Cases	Herds
Cattle	Cancer Eye	2	2

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Toole County

	Disease	Cases	Herds
Dogs	Distemper	1	1
Horses	Strangles	6	3

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Treasure County

	Disease	Cases	Herds
Dogs	Distemper	2	2
Horses	Influenza	12	3

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Valley County

	Disease	Cases	Herds
Cattle	Actinomycosis	1	1

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Yellowstone County

	Disease	Cases	Herds
Cattle	Inf. Keratitis	39	4
Dogs	Parvo-Virus	10	10
Horses	Strangles	5	5

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TOTAL CASES AND HERDS		491	199

636.05
M 10m
Sept. 1982

PLEASE RETURN

STATE DOCUMENTS COLLECTION

STATE DOCUMENTS
PERIODICALS

SEP 22 1982

MONTANA STATE LIBRARY
930 E Lyndale Ave.
Helena, Montana 59601

STATE OF MONTANA
DEPARTMENT OF LIVESTOCK
Animal Health Division
Helena, Montana 59620

1982
SEPTEMBER
MONTHLY LETTER

Board of Livestock

Robert G. Barthelmess, Chairman...Miles City
Nancy Espy.....Boyes
Elmer Flynn.....Missoula
Donald L. Herzog.....Rapelje
John Kelly.....Red Lodge
Ralph J. Parker.....Fort Shaw
Robert M. Simons.....Turner

JAMES W. GLOSSER, D.V.M.
Administrator
&
State Veterinarian

BRUCELLOSIS

At long last, after almost 50 years of effort, Montana has no more brucellosis in cattle.

On August 18, 1982, Dr. Owen James released the last brucellosis infected herd from quarantine. This herd is subject to an assurance test 6 months after release of quarantine, but the owner has elected to test at 60 day intervals until that time in order to insure that no surprises crop up on the final test.

This is the first time that Montana has been at the zero infection level since it's first foray into brucellosis control in 1934.

At the peak, in the mid-fifties, after the initial testing was completed, approximately 10% of the state's 25,000 herds were found to be infected.

Now after almost 30 years of the vagaries of the Federal Brucellosis Eradication Program, the state does not have any infected herds.

This does not say that Montana will not experience flare-ups and other problems associated with brucellosis, but in case of such occurrences we will handle the disease as being exotic to Montana.

Stock owners and veterinarians alike must be especially mindful of the dangers, and guard against reintroduction of the disease.

The need for official vaccination is still present, all owners should have all heifers immunized against brucellosis.

All purchases of breeding cows should be tested regardless of source. All purchases and other imports from out-of-state will be required to have been tested prior to import, then retested 45-120 days after entry. The only exceptions will be cattle from Zero Infection states.

All females still must be official calfhood brucellosis vaccinates to be eligible for entry into Montana.

VESICULAR STOMATITIS

In a telephone conversation with Dr. James Schoenfeld, Utah State Veterinarian, he stated that there have been several recent cases of Vesicular Stomatitis in horses and cattle in New Mexico, Colorado and near Moab, Utah.

Since this disease is one that must be considered in an differential diagnosis when thinking of Foot and Mouth Disease. All practitioners should keep a wary eye peeled.

In any case of suspected vesicular disease this office should be notified by telephone immediately for assistance and information. A foreign animal disease diagnostician will be dispatched, post haste, to your rescue.

Vesicular Stomatitis is an arthropod borne viral disease that effects horses, cattle and swine, it can affect sheep but they are relatively resistant.

Morbidity can range from 8 - 75% and the disease is usually self limiting. Treatment isn't usually effective in outbreaks. In some endemic areas prophylaxis is possible.

In these days of rapid livestock movement we can have southern cattle or horses up here tomorrow morning so unusual symptoms and lesions should be carefully considered.

Pyrexia, excessive salivation, buccal, glossal and mucosal vesicles and erosions, vesicles and erosions of the foot, can be signs . Differential diagnosis must consider Foot & Mouth, Vesicular Exanthema, IBR, BVD, and malignant catarrhal fever. I know of one case in which vesicular like lesions were found on the feet of a bull from which bluetongue virus was isolated.

Laboratory assistance and confirmation is essential in rendering a diagnosis.

Addendum -- Dr. Ferlicka was dispatched to Colorado during the week of August 8 to work with the Foreign Animal Diagnosticians team tracking the VS outbreak. He got some valuable experience in diagnosing and working with VS.

To this date, Montana has not experienced a case of the disease, but stringent import restrictions are being maintained.

Hopefully a killing frost will occur to the south pretty soon and eliminate the problem.

FAMOUS "CURE" FOR NAVICULAR DISEASE

There is a western veterinarian who claims to have found the cause and cure for navicular disease. Reputedly the cause is an organism he has named Haemophilus navicularis and the cure is a nostrum also of his own development, supposedly.

Now being of the old school and having treated several cases of navicular myself, to see, would be to believe.

The cost of the treatment, while being sizable, is none of my concern. The man's legal right to practice veterinary medicine within the confines of the State of Montana is of concern to me as a veterinarian. He either better be properly licensed to practice in Montana or come in on consultation at the request of a licensed Montana practitioner.

These points, while irritating to me, are not the major thought behind this article. The main point being, that I suspect that the potion being injected into the afflicted equine is none other than dear old Strain 19 B. abortus vaccine.

While it is no crime as a licensed, deputized and accredited veterinarian to use Strain 19 in Montana, the package insert with the vaccine states it is to be used "in female bovines only".

Again, if used in species other that that indicated, the liability is entirely that of the veterinarian administering the biologic. That liability would include damages incurred if a herd of cattle we requarantined for test and removal of affected animals because a Brucella positive horse had been diagnosed on a premise as a result of Strain 19 use.

Realizing that at times mysterious results can occur with exotic treatments, it is not wise to totally condemn this therapy as ineffective. But if Brucella abortus vaccine is used in any horse in Montana, I would surely insist that I be notified to prevent any catastrophes such as quarantined herds and veterinary negligence suits.

Just think, if you used the reduced dosage, a guy might make his everlasting fortune by buying one twenty dose vial of vaccine.

Also, a word of history---the use of Strain 19 in horses is an old therapy for several conditions, of which an intermittent lameness is one.

BRAD

P. S. Recently a remnant of a bottle of this famed potion was sent to National Veterinary Services Laboratories, Ames, Iowa. The lab report (of which I have a copy) states that Brucella abortus Strain 19 was isolated.

Hopefully, veterinarians who have worked with this man and his cure, have not paid an exorbitant price for this nostrum since it only costs a few cents per dose in their own refrigerator.

LABORATORY SUBMISSION FORMS

Deputy State Veterinarians your assistance is needed! The Animal Health Division has recently undergone a change in its filing system.

As many of you are aware, we have people living in the state with similar or alike names. One of the problems we're encountering is not having enough information on the submission forms to indicate where the owner is located. Please help us by including full names and addresses on the submission forms.

WMVMA PROGRAM

There will be a day long continuing education program in Missoula on October 2, 1982. (Location arrangements are being made.)

Subject: Small and Large Animal Clinical Pathology

Presented by: Dr. Jack L. Taylor
Veterinary Reference Laboratory
Salt Lake City, UT

Registration Fee:

Early registration (by Sept. 15) for members - $20.00
Late registration for members - 25.00
Non-members - 35.00

Send registration fees to:

Dr. Richard Race
Rocky Mountain Laboratory
Hamilton, MT 59840

Any questions may be directed to Dr. Race (363-3407) or Dr. M. E. Pruyn (251-4150).

DIAGNOSTIC LABORATORY NEWS
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I. Accessions received in July 1982:

		SEROLOGY ACCESSIONS
BOVINE	82	413
EQUINE	59	205
PORCINE	10	6
OVINE	10	1
FELINE	60	9
CANINE	123	1
AVIAN	6	
WILDLIFE	130	
MISC.	18	23
TOTAL	498	658

II. Serology

A. Brucellosis (all species) total sera -- 5,176; 4 positive
   1. Brucellosis routine tests -- 3,848 sera
   2. Quarantine herd tests -- 145 sera
   3. Slaughter samples -- 1,179 sera; 4 positive
   4. Seminal plasma - Brucellosis -- 4 negative

B. Brucellosis CF tests -- 4

C. Leptospirosis (all species) -- 47 sera
   1. L. pomona -- 5 positive
   2. L. icterohemorrhagia -- 1 positive
   3. L. grippotyphosa -- 2 positive
   4. L. canicola -- 3 positive
   5. L. tarassovi -- 1 positive

D. Bluetongue -- 111 sera; 6 positive

E. Anaplasmosis -- 201 sera; 2 positive

F. IBR -- 67 sera; 5 positive

G. BVD -- 69 sera; 11 positive

H. PI_3 -- 50 sera; 11 positive

I. BLV -- 8 sera; all negative

J. EIA -- 467 sera; 3 positive

K. Pseudorabies -- 162 sera; Routine -- 20, Slaughter -- 142; all negative

L. Feline Leukemia Virus -- 11 sera; 2 positive

M. Mare Pregnancy Test -- 23 sera; 10 positive

III. Bacteriology
- A. Total -- 124 accessions processed resulting in 130 isolates.
- B. Antibiotic sensitivities were run on 103 isolates.
- C. Salmonella typhimurium -- porcine case
- D. Mouse inoculation tests -- 1 negative

IV. Electron Microscopy (all negative)
- A. Porcine -- 4 samples
- B. Ovine -- 1 sample
- C. Canine -- 2 samples

V. Virology
- A. Virus isolation attempts
  1. Bovine -- 13 cases; 1 positive PI_3
  2. Ovine -- 1 case; undetermined
  3. Caprine -- 1 case; positive PI_3
- B. Fluorescent antibody tests
  1. IBR -- 4; 1 positive
  2. BVD -- 19 negative
  3. PI_3 -- 1 positive
  4. TGE -- 5; 1 positive

VI. Pathology
- A. 188 accessions
- B. 356 slides from 877 tissues

VII. Rabies examinations
- A. 191 requests
  1. Human exposure
     a. 1 positive (bat - Missoula county)
     b. 23 negative
  2. No human exposure
     a. 8 positive 3 bats - Yellowstone (2), Lincoln (1)
        5 skunks - McCone (2), Prairie (3)
     b. 159 negative

WE NEED YOUR HELP!!

Herd owner files are being developed in the Helena office. In order to facilitate this, it is essential that you fill out the owner's address block completely and legibly. Please include full name, street or box number, city and zip code. Thank you for your cooperation.

RABIES EXAMINATIONS
****

JULY 1982

	POSITIVE HUMAN EXPOSURE	POSITIVE NO HUMAN EXPOSURE	NEGATIVE HUMAN EXPOSURE	NEGATIVE NO HUMAN EXPOSURE	TOTAL SPECIMENS
Bovine			1		1
Ovine				1	1
Feline			7	14	21
Canine			7	9	16
Wildlife and Other					
Bat	1	3		52	56
Chipmunk			1		1
Coyote				2	2
Ferret				2	2
Gerbil				1	1
Gopher			2	1	3
Mouse			3		3
Raccoon				8	8
Skunk		5		66	71
Squirrel			2	1	3
Weasel				2	2
TOTAL	1	8	23	159	191

VETERINARIAN'S ANIMAL DISEASE REPORT
JUNE 1982

Beaverhead County

	Disease	Cases	Herds
Cattle	Urolithiasis	1	1
Dogs	Distemper	3	3
Horses	Influenza	3	1

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Big Horn County

	Disease	Cases	Herds
Cattle	Anaplasmosis	2	2

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Blaine County

	Disease	Cases	Herds
Sheep	Contagious Ecthyma	20	2

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Custer County

	Disease	Cases	Herds
Dogs	Parvo-Virus	1	1

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Dawson County

	Disease	Cases	Herds
Cattle	Leptospirosis	2	2
Dogs	Parvo-Virus	3	3
Horses	Infectious Thinopneumonitis	1	1

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Deer Lodge County

	Disease	Cases	Herds
Dogs	Parvo-Virus	2	1

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Fallon County

	Disease	Cases	Herds
Cattle	Actinobacillosis	1	1

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Fergus County

	Disease	Cases	Herds
Cattle	Actinomycosis	1	1

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Gallatin County

	Disease	Cases	Herds
Cattle	Bovine Respiratory Disease	6	2
Cattle	Leptospirosis	1	1
Horses	Strangles	2	2
Sheep	Contagious Ecthyma	1	1

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Garfield County

	Disease	Cases	Herds
Cattle	B.V.D.	1	1

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Hill County

	Disease	Cases	Herds
Dogs	Parvo-Virus	4	4

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Lake County

	Disease	Cases	Herds
Dogs	Parvo-Virus	1	1

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Lincoln County

	Disease	Cases	Herds
Dogs	Parvo-Virus	1	1
Horses	Influenza	3	1

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Madison County

	Disease	Cases	Herds
Cattle	Bovine Respiratory Disease	6	3
Horses	Strangles	4	1

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McCone County

	Disease	Cases	Herds
Cattle	Leptospirosis	1	1
Horses	Influenza	1	1
Sheep	Enterotoxemia	2	2

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Meagher County

	Disease	Cases	Herds
Dogs	Distemper	2	2
Horses	Strangles	1	1

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Missoula County

	Disease	Cases	Herds
Cattle	Inf. Keratitis	8	2
Dogs	Distemper	1	1
Horses	Strangles	1	1

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Powder River County

	Disease	Cases	Herds
Cattle	Urolithiasis	1	1
Dogs	Parvo-Virus	1	1
Horses	Strangles	1	1
Sheep	Contagious Ecthyma	30	1

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Prairie County

	Disease	Cases	Herds
Cattle	Pulmonary Emphysema	1	1

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Ravalli County

	Disease	Cases	Herds
Dogs	Parvo-Virus	4	4

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Richland County

	Disease	Cases	Herds
Dogs	Parvo-Virus	2	2

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Roosevelt County

	Disease	Cases	Herds
Horses	Strangles	1	1

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Rosebud County

	Disease	Cases	Herds
Cattle	B.V.C.	1	1
Dogs	Parvo-Virus	4	4
Horses	Strangles	10	6
Poultry	Infectious Bronchitis	50	1
Swine	Erysipelas	2	1

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Sanders County

	Disease	Cases	Herds
Cattle	Pulmonary Emphysema	5	1
Dogs	Distemper	4	4
Horses	Influenza	1	1

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Silver Bow County

	Disease	Cases	Herds
Cattle	Foot Rot	5	2

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Valley County

	Disease	Cases	Herds
Cattle	Shipping Fever	2	1
Dogs	Distemper	1	1

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Yellowstone County

	Disease	Cases	Herds
Cattle	Inf. Keratitis	108	10

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TOTAL CASES AND HERDS		1,223	279

VETERINARIAN'S ANIMAL DISEASE REPORT
JULY 1982

Beaverhead County

	Disease	Cases	Herds
Cattle	Foot Rot	4	3

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Blaine County

	Disease	Cases	Herds
Cattle	Foot Rot	1	1

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Broadwater County

	Disease	Cases	Herds
Dogs	Parvo-Virus	3	3

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Carbon County

	Disease	Cases	Herds
Cattle	Coccidiosis	1	1

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Cascade County

	Disease	Cases	Herds
Cattle	Bovine Respiratory Disease	23	4
Dogs	Parvo-Virus	9	9
Horses	Strangles	6	1

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Choteau County

	Disease	Cases	Herds
Horses	Strangles	1	1

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Custer County

	Disease	Cases	Herds
Dogs	Parvo-Virus	2	2

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Dawson County

	Disease	Cases	Herds
Cattle	Cancer Eye	3	1
Dogs	Parvo-Virus	20	20

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Deer Lodge County

	Disease	Cases	Herds
Dogs	Parvo-Virus	3	3

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Fallon County

	Disease	Cases	Herds
Cattle	Foot Rot	1	1

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Flathead County

	Disease	Cases	Herds
Dogs	Parvo-Virus	9	9
Sheep	Foot Rot	5	2

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Gallatin County

	Disease	Cases	Herds
Cattle	Pulmonary Emphysema	1	1
Dogs	Parvo-Virus	1	1
Horses	Strangles	17	4
Sheep	R.E.O.	6	3

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Golden Valley County

	Disease	Cases	Herds
Cattle	Coccidiosis	1	1

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Hill County

	Disease	Cases	Herds
Dogs	Parvo-Virus	6	6

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Jefferson County

	Disease	Cases	Herds
Dogs	Distemper	1	1

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Lake County

	Disease	Cases	Herds
Cattle	Helminthiasis	140	3
Dogs	Parvo-Virus	3	3
Horses	Strangles	33	3

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Lewis & Clark County

	Disease	Cases	Herds
Cats	Fe Leuk	5	5
Cattle	Coccidiosis	1	1
Dogs	Parvo-Virus	8	8
Horses	Influenza	8	5

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Madison County

	Disease	Cases	Herds
Cattle	B.V.D.	12	1

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Missoula County

	Disease	Cases	Herds
Cattle	Pulmonary Emphysema	4	4
Dogs	Parvo-Virus	20	20
Horses	Strangles	20	4
Sheep	Enterotoxemia	1	1

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Musselshell County

	Disease	Cases	Herds
Dogs	Parvo-Virus	1	1
Horses	Strangles	3	1

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Phillips County

	Disease	Cases	Herds
Horses	Strangles	1	1

* * * * * * * * * * *

Powell County

	Disease	Cases	Herds
Dogs	Infectious Hepatitis	1	1

* * * * * * * * * * *

Ravalli County

	Disease	Cases	Herds
Cattle	I.B.R.	4	2
Dogs	Parvo-Virus	1	1
Horses	Strangles	1	1

* * * * * * * * * * *

Roosevelt County

	Disease	Cases	Herds
Cattle	I.B.R.	6	1

* * * * * * * * * * *

Silver Bow County

	Disease	Cases	Herds
Cattle	Cancer Eye	1	1
Dogs	Parvo-Virus	7	7

* * * * * * * * * *

Stillwater County

	Disease	Cases	Herds
Cattle	Coccidiosis	1	1
Horses	Infectious Anemia	1	1
Sheep	R.E.O.	6	2

* * * * * * * * * *

Valley County

	Disease	Cases	Herds
Cattle	Cancer Eye	1	1
Dogs	Parvo-Virus	5	5
Horses	Influenza	5	5
Sheep	R.E.O.	1	1

* * * * * * * * * *

Wheatland County

	Disease	Cases	Herds
Cattle	Urolithiasis	1	1

* * * * * * * * * *

Yellowstone County

	Disease	Cases	Herds
Cattle	Inf. Keratitis	10	1
Dogs	Parvo-Virus	2	2
Horses	Strangles	2	2

* * * * * * * * * *

TOTAL CASES AND HERDS	980	371

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STATE OF MONTANA
DEPARTMENT OF LIVESTOCK
Animal Health Division
Helena, Montana 59620

1982
JULY - AUGUST
MONTHLY LETTER

Board of Livestock

Robert G. Barthelmess, Chairman...Miles City
Nancy Espy.....Boyes
Elmer Flynn.....Missoula
Donald L. Herzog.....Rapelje
John Kelly.....Red Lodge
Ralph J. Parker.....Fort Shaw
Robert M. Simons.....Turner

JAMES W. GLOSSER, D.V.M.
Administrator
&
State Veterinarian

THIS IS THE MONTHLY NEWSLETTER FOR JULY-AUGUST, AND WHATEVER OTHER MONTHS THAT HAVE BEEN SLIGHTED.

LATELY SOMETHING KEEPS MAKING THE PUBLICITY SCHEDULE COME OFTENER THAN USUAL.

EQUINE ENCEPHALOMYELITIS, EASTERN & WESTERN

We are approaching the season for reports of Equine Encephalomyelitis and practitioners should remember that these are reportable diseases in Montana and that this Department has a joint monitoring project with the Department of Health.

When you have made a clinical diagnosis of any of the equine encephalitides, please call and let us know so that surveillance measures can be taken. Periodically we are notified of human cases of encephalitis and only on a retrospective study are equine cases discovered to have been present.

Clients should be made aware that the best protection is still prophylaxis and their horses should be revaccinated annually.

MORE BRUCELLOSIS

For many years Montana, as well as most other states and the U. S. Government, has been concerned with a number of animal diseases such as Tuberculosis, Brucellosis, Hog Cholera, etc., and programs for the control and/or eradication of these maladies have developed.

Over the years, some very good work has been done in the endeavor to eliminate these problems and at the same time some approaches developed that were neither medically sound nor economically feasible. Unfortunately, at times the drain continued too long.

In the recent past, attempts through the USAHA Brucellosis Committee, have been made to steer the Brucellosis Committee back to a track dictated by practicality, economic feasibility and medical soundness.

The road has been rough and in the past year it seems that the Federal forces lost sight of the fact that the state-federal cooperative programs require cooperation in both directions. Strong attempts were made to impose some very unrealistic strictures on the various states and their industries. The stronger requirements were to be placed on states with the least infection.

At the recent USAHA Brucellosis Committee Meeting in Dallas, the Federal Government finally seemed to realize that there is concerted and contin-

objection to parts of their proposals for change in the UM&R and accompanying change in the CFR.

Apparently, the Federal Brucellosis program people have been unwilling to acknowledge that many of the complaints are about the direction their program is taking are valid and makes the program unpalatable to the livestock industry in general.

One of the largest detriments is the undue emphasis being placed on the Brucellosis card test use, and interpretation of positive reactions to it. There has been a total inability, on the part of the Federal Government, to recognize that in Brucellosis vaccinated populations that test has an uncanny ability to cull out vaccinates.

If that test is allowed to stand as the designator of reactors, in MCI slaughter samples, market tests or country tests, states such as Montana, with high percentages of calfhood vaccinated females will be in deep trouble with state status. I can envision Montana being Class C within a month and Class W in six months.

States in the Southeast that are recognizing that their only salvation is to increase the general level of herd immunity through calfhood and adult vaccination are looking more and more at what their prospects will be when they have to battle the federal interpretation of the card test in their increasing vaccinated herds.

At any rate, after years of dictating the contents of the Program, possibly now the Feds might start listening to reason and work with the industry and the states before what support there is for the Brucellosis Program is lost.

At times a hard look at anyone's budget can be beneficial.

HOUSE FIRE

We received word that on July 11 the house of Dr. Harry and Lou Hopson, Wolf Point, burned to the ground. Fortunately no one was in the house at the time.

The family had left for a few minutes to take their daughter to a neighbor's and returned to find that a fire of undetermined origin consumed the home.

The good people of the Wolf Point community have rallied to lend their support.

Our heartfelt sympathies to Harry and Lou.

RABIES QUARANTINES

Dr. Ferlicka has informed me that the following counties have been released from rabies quarantines:

Effective July 23, 1982 - Fallon, Carter and Custer
Effective August 1, 1982 - Phillips, Yellowstone, Gallatin, Flathead, Big Horn and Wheatland

NEWSLETTER MAILING LIST

We have received information that some individuals may be receiving more than one copy of our newsletter. If this is the case for you, please contact the Citizens' Advocate Office at (1-800-332-2272). That office will convey this information to our office.

I. Accessions received in May 1982:

	May 1982	May 1981	% change
BOVINE	200	237	-15.61%
EQUINE	75	82	- 8.53%
PORCINE	8	10	-20.00%
OVINE	15	25	-40.00%
FELINE	35	31	12.90%
CANINE	86	85	1.17%
AVIAN	8	13	-38.46%
WILDLIFE	45	42	7.14%
MISC.	17	42	-59.52%
TOTAL	489	567	-13.76%

II. Serology

A. Brucellosis (all species) Total sera -- 20,754; 4 positive
   1. Brucellosis routine tests -- 19,500 sera; 3 positve
   2. Quarantine herd tests -- 139 sera
   3. Slaughter samples -- 1,102 sera; 1 positive
   4. Seminal plasma -- 13 negative

B. Brucellosis CF tests -- 204

C. Leptospirosis (all species) -- 230 sera
   1. L. pomona -- 9 positive
   2. L. hardjo -- 15 positive
   3. L. icterohemorrhagia -- 3 positive
   4. L. grippotyphosa -- 19 positive
   5. L. autumnalis -- 1 positive
   6. L. canicola -- 12 positive

D. Bluetongue -- 227 sera; 2 positive

E. Anaplasmosis -- 270 sera; 1 positive

F. IBR -- 157 sera; 40 positive

G. BVD -- 168 sera; 91 positive

H. PI_3 -- 68 sera; 27 positive

I. BLV -- 21 sera; negative

J. EIA -- 318 sera; negative

K. Pseudorabies -- 77 sera; slaughter samples, negative

L. Feline Leukemia Virus -- 10 sera; 3 positive

M. MIP -- 8 sera; 4 positive

III. Rabies
A. 89 requests
1. Human exposure
a. 5 positive (bovine - McCone, canine - Wheatland, 2 muskrats - Flathead and Yellowstone, and skunk - Judith Basin)
b. 32 negative
2. No human exposure
a. 7 positive (bat - Jefferson, 6 skunks - Gallatin, Phillips, Dawson, Richland, Judith Basin and McCone)
b. 45 negative

IV. Bacteriology
A. Total -- 276 accessions processed resulting in 224 isolates.
B. Antibiotic sensitivities were run on 209 isolates.
C. FAT (clostridia) -- 5 bovine cases; Cl. novyii 1 case
D. E. coli agglutination tests -- 7 negative
E. 1 set of tissue was cultured for Brucella with negative results.
F. Mouse inoculation tests - 2 negative

V. Virology
A. Virus isolation attempts
1. 79 bovine cases; 1 BVD
2. 5 porcine cases
3. 4 ovine cases
B. Fluorescent antibody tests
1. IBR -- 6 negative (bovine)
2. BVD -- 4 negative (ovine), 98; 11 positive (bovine)
3. PI_3 -- 1 negative (bovine)
4. PPV -- 2 negative
C. Leptospirosis culture -- 2 negative

VI. Electron Microscopy
A. Bovine -- 4 samples; 1 rotavirus
B. Ovine -- 1 sample
C. Canine -- 1 sample

VII. Pathology -- 436 slides from 1137 tissues were examined during May

Accessions	FY 1980	FY 1981	FY 1982
BOVINE	2,605	2,829	2,442
EQUINE	454	633	657
PORCINE	251	235	140
OVINE	226	287	219
FELINE	203	308	494
CANINE	560	917	1,068
AVIAN	90	105	77
WILDLIFE	358	531	693
MISC.	349	438	234
TOTAL	5,096	6,283	6,024

Serology Accessions			
BOVINE	12,562	12,624	10,772
EQUINE	1,980	1,885	1,747
PORCINE	210	146	117
OVINE	56	94	45
FELINE	0	41	107
CANINE	32	30	46
AVIAN	2	2	0
WILDLIFE	35	50	137
MISC.	148	154	113
TOTAL	15,025	15,026	13,084

SEROLOGIC TESTS

	FY 1980	FY 1981	FY 1982
Brucellosis (all species)	377,290/1,733 positive	254,668/1,207 positive	257,517/307 positive
Routine tests	245,612/601 positive	228,600/301 positive	179,600/183 positive
Quarantine herd tests	14,038/338 positive	9,660/179 positive	1,551/7 positive
Slaughter samples	117,509/794 positive	116,295/706 positive	76,265/90 postive
Seminal plasma	131	115	116
CF tests	3,461	8,965	1,017
Leptospirosis (all species)	3,296	3,487	4,948
Bluetongue	4,370/15 positive	6,544/542 positive	5,799/220 positive
Anaplasmosis	3,224/61 positive	5,444/106 positive	5,626/215 positive
IBR	1,575	2,202	2,011
BVD	1,412	1,947	2,090
PI_3	666	959	1,079
BLV	117/3 positive	591/3 positive	329/5 positive
EIA	4,219/27 positive	3,687/37 positive	3,244/16 positive
Mare Pregnancy Test	0/0	19/6 positive	89/34 positive
Pseudorabies - total	1,634/10	4,267/4 positive	2,069
Feline Leukemia	0/0	0/0	114/61 positive

BACTERIOLOGY

Accessions	2,831	3,314	2,951
Isolates	3,700	4,086	2,733
Antibiotic sensitivities	2,823	3,191	2,184
Enteropathic *E. coli* tests	210/124 positive	322/87 positive	486/61 positive

ELECTRON MICROSCOPY

	FY 1980	FY 1981	FY 1982
Number of samples	200	277	256
Coronavirus	43	39	22
Rotavirus	24	60	52
Coronavirus-Rotavirus	1	3	0
Parvovirus	0	6	10
Poxvirus	0	2	3
Enterovirus	0	0	2

VIROLOGY

Virus isolation attempts (all species)	236	356	506
FA tests (IBR, BVD, PI_3, PPV, TGE, Chlamydia, Rhino)	0	321	832

RABIES EXAMINATIONS

	FY 1980	FY 1981	FY 1982
Requests	553	872	1,228
Human Exposure	217/3 positive (bovine, canine, skunk)	310/13 positive (bovine-3, feline-4, canine-3, bat-2, skunk-1)	457/18 positive SEE ATTACHED
No Human Exposure	296/37 positive (19 bats, 18 skunks)	562/87 positive (bovine, ovine-2, feline-2, canine-2, bat-14, skunk-66)	771/83 positive SEE ATTACHED

HISTOLOGY

	Accessions	Tissues	Slides
FY 1982	2,649	15,152	5,527

RABIES EXAMINATIONS

FY 1982

	Positive Human Exposure	Positive No Human Exposure	Negative Human Exposure	Negative No Human Exposure	Total Specimens
Bovine	3		11	18	32
Equine	2		3	5	10
Porcine				1	1
Ovine				4	4
Feline	3	2	185	99	289
Canine	2		150	47	199
Avian			1	1	2
Wildlife and Other					
Badger				2	2
Bat	3	27	10	192	232
Bear			1	2	3
Beaver			1		1
Chipmunk				1	1
Coyote			3	13	16
Deer				1	1
Ferret			4		4
Fox		1	9	5	15
Goat			1	1	2
Gopher			4	8	12
Hamster			5		5
Marmot			1	4	5
Mink				3	3
Mole			1		1
Mouse			17	1	18
Muskrat	3		5	15	23
Packrat			3	1	4
Rabbit			5	7	12
Raccoon			10	31	41
Skunk	2	53	2	218	275
Squirrel			4	3	7
Vole			1		1
Weasel			2	2	4
Woodchuck				3	3
TOTAL	18	83	439	688	1,228

POLIOENCEPHALOMALACIA

by Jack C. Rhyan, D.V.M., M. S

Polioencephalomalacia or "polio" is a sporadic disease of cattle, sheep and goats. The laboratory diagnosis of the disease is made by observation of the typical brain lesions. When severe, these lesions may be observed without magnification, but more often require microscopic examination. The lesions are caused by brain swelling resulting in increased pressure on the outer grey matter which causes the typical necrosis. The malacic areas have a yellow appearance and often show up well under an ultraviolet light.

The cause of the disease is not completely understood, but appears to be related to a thiamine inadequacy. This could be due to inadequate production of thiamine by rumen bacteria such as may occur in animals being fed high concentrate/low roughage diets. It could also be caused by the presence of certain naturally occurring thiaminases or thiamine inhibitors in the tissues or gastrointestinal tract of the animal.

The disease causes central nervous system signs. These are most commonly blindness, head pressing, champing of the jaws, muscle tremor, irritation and convulsions. The signs usually come on suddenly and the animal may die in 24 hours or last up to several days. Mild cases may completely recover or remain permanently blind.

We usually see the disease in one of two situations. The first is the textbook variety seen in young growing animals 6-18 months of age which have been on concentrate feed for several weeks. These animals often respond to prompt treatment with thiamine.

The second usual situation is that of dry range conditions where evaporation and concentration of water supplies results in the animals consuming water which contains high total dissolved solids (TDS). Water which measures over 7,000 parts per million TDS is considered unsafe for drinking. The signs and lesions of this form of polio are identical to the high concentrate feed form though the exact relationship of the two types is not understood.

A third condition which produces similar signs and lesions is lead poisoning. The clinical signs are quite similar to those of polio and the brain lesions when present are indistinguishable. The laboratory diagnosis of lead poisoning is made by performing toxicologic tests for lead on liver, kidney or whole blood.

In summary, there are three different situations which may produce signs and lesions typical of polio: 1. young growing animals on a high concentrate/low roughage diet; 2. cattle consuming water high in total dissolved solids; and, 3. lead poisoning.

The submission of brain and routine tissues (spleen, kidney, intestine, lung and liver) for histologic evaluation with approximately one pound of fresh kidney (preferred) or liver for toxicology and one quart of the water supply, if in question, should allow laboratory confirmation.

The thin styrofoam ice chests sometimes used for shipping specimens to the Diagnostic Laboratory will not be returned, unless specifically requested. Shipping costs are almost the same as or more than the cost of the ice chest.

Our styrofoam shippers with a cardboard outside are available for $7.50. As you may have noticed we have replaced some of the outside sleeves at a cost of $2.50. They get very worn after several years of travel.

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1982
JUNE
MONTHLY LETTER

Board of Livestock

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Nancy Espy.....Boyes
Elmer Flynn.....Missoula
Donald L. Herzog.....Rapelje
John Kelly.....Red Lodge
Ralph J. Parker.....Fort Shaw
Robert M. Simons.....Turner

JAMES W. GLOSSER, D.V.M.
Administrator
&
State Veterinarian

WHAT IS AN OFFICIAL VACCINATE?

There seems to be a difference of opinion as to what your responsibility as an accredited Deputy State Veterinarian is, when it comes to brucellosis vaccinating cattle!

There isn't any leeway! You instill the vaccine (reduced to correct dosage according to protocol) into the heifer; you tattoo the heifer in the right ear; you place a USDA vaccination tag in her right ear; you complete a vaccination certificate with all proper information, including name and address of owner, number of heifers vaccinated, description, age, owner's brand, etc., and RECORD THE VACCINATION EAR TAG NUMBERS ON THE CERTIFICATES, and YOU SEND A COPY TO HELENA.

Then Your Client has an official brucellosis vaccinated heifer, you're happy, your client is happy, and we're happy.

When you do not go through all the procedures required to do official vaccination, you are not doing your client any service. All you're doing is guaranteeing that client a wreck sooner or later.

With the adoption of the reduced dose, if vaccination is done properly, problems associated with persistent titers and Strain 19 infections are reduced markedly, but they still occur.

The greatest problem, at the present time, with improperly identified heifers is the difficulty encountered in moving these cattle when an increasing number of states are requiring that all heifers imported must be officially vaccinated. When these old girls move, you might not be the one who is trying to ascertain whether or not they have been vaccinated.

Last but not least, we have an increasing interest in proper identification of these cattle since this office is now out of the "Quill Pen Age" and into Electronic Word Processing Age, or as we call it, The Electric Secretary Age.

Those vaccination and ID tag numbers are what we list cattle by, so after properly putting the vaccination tag in place, use it for ID on subsequent tests, we can trace it from here on out. Also, it would be a good idea if you practitioners kept your own records, however you do it, of when and for whom you used a particular eartag. It's surprising how many times those records can show that you've failed to bill someone for services.

I realize that change is difficult for a lot of you old mossbacks that remember when a U notch was adequate and it's inconvenient for a lot of you with just a little growth of fungus on the dorsum, but time, people, and requirements do change, so if you are going to take the money for the job,

you might as well do it right and render your client a good service, because when a Montana rancher calls and bellers at me when he has heifers tied up because they can't be identified as official vaccinates, I'm not a bit bashful about telling him which dumb b_ _ _ _ _d is at the seat of his troubles!

Lovingly yours,

BRAD

NEWSLETTER MAILING LIST

We have received information that some individuals may be receiving more than one copy of our newsletter. If this is the case for you, please contact the Citizens' Advocate Office at (1-800-332-2272). That office will convey this information to our office.

A LITTLE BIT OF HISTORY

Recently Dr. H. F. Wilkins, retired Montana State Veterinarian, sent the following letter to this office.

It's interesting to see that many of the concerns of sixty years ago are still a reason for thought today.

Granted some of the political reference does not apply to you as a practitioner, but most of you have encountered a situation with one of your clients, during which, the strictures placed upon you by your deputyship have created a situation in which you may have felt politically pressured.

The references to the accomplishments that have been attained by the Department of Livestock, Animal Health Division, nee Live Stock Sanitary Board, are worth noting, indeed.

For the information of the more seasoned veterinarians in the state, Dr. Wilkins lives in Walnut Creek, California, will be 90 years young this summer, and spends a fair amount of time traveling. He enjoys keeping up with veterinary happenings in Montana and will visit family here again this summer.

Live Stock Sanitary Board
J. H. Burke, Chairman
D. J. Donohue, M.D.
W. J. Butler, D.V.S.
Secretary.

MONTANA
STATE VETERINARY SURGEON
LIVE STOCK SANITARY BOARD
LABORATORIES
HELENA.

W. J. Butler
State Veterinary Surgeon
Hadleigh Marsh
Pathologist and Bacteriologist
Emil Starz, Chemist

October 20th,1920

Dr. E. D. Nash, Helena, Mont.
Dr. J. C. Boyd, Kalispell, Mont.
Dr. N. T. Gunn, Butte, Mont.
Dr. B. O. Fisher, Great Falls, Mont.
Dr. C. A. Hatterschaid, Glendive, Mont.
Dr. C. F. Kilbury, Butte, Mont.
Dr. J. W. Richardson, Malta, Mont.
Dr. N. B. Smith, Billings, Mont.
Dr. H. F. Wilkins, Lewistown, Mont.
Mr. John C. Taylor, Bynum, Mont.
Mr. Frank P. Madden, Dillon, Mont.

Dear Sir:-

This office has received two letters addressed to the veterinarians of Montana with reference to the political campaign in Montana. I am writing you this letter to reiterate and remind you of the instructions of the Live Stock Sanitary Board.

The Live Stock Sanitary Board is not in politics. Neither the State Veterinary Surgeon, or the Live Stock Sanitary Board are in any way responsible or have any connection whatsoever with either of the two political letters addressed to the veterinarians of Montana.

A sanitarian, if he is to do his work faithfully and to the best interest of the people, must be beyond political influence. The Sanitary Board asks neither your creed nor your politics. You are a free American citizen and you will vote without influence from this office and as your conscience as a citizen dictates. What the Sanitary Board demands is professional ability with loyal and faithful service to the people and live stock interests.

The efficient work of the Montana Live Stock Sanitary Board is recognized throughout the United States. Our work in the eradication of tuberculosis has never been equalled. We stand first in the entire world in the accuracy of our tuberculin testing. We are the only state or country that has such faith in our work that we enacted into the law a proviso that when we make a mistake in condemning an animal that the owner would be paid the full book value. We were the first state to provide for an emergency fund. Such a provision was later adopted by the United States Government. We are the only state or country that ever eradicated foot and mouth disease from a range section.

We were the first organization of this kind to provide for a clinical diagnostic laboratory in conjunction with a chemical laboratory. We were the first Sanitary Board to divide the State into districts and place a salaried veterinarian in complete charge of that district. A plan that is now being followed by other states and the Federal Government.

I write you these few facts not with the idea of advertising the work of the Live Stock Sanitary Board, but with an endeavor to more forcibly impress upon you the absolute necessity of sanitary work being beyond the influence of political campaigns. If the work of this organization had been hampered by politics then the Live Stock Sanitary Board would never have accomplished the work which it has accomplished.

You will, therefore, not become involved in politics nor solitict any political support for the State Veterinary Surgeon.

The work of the State Veterinary Surgeon must stand for itself.

Yours very truly,

W. J. Butler

WJB-RLH

State Veterinary Surgeon.

I. Accessions received in April 1982:

	April 1982	April 1981	% change
BOVINE	398	418	- 4.78%
EQUINE	79	96	-17.71%
PORCINE	15	23	-34.78%
OVINE	39	68	-42.65%
FELINE	36	17	111.76%
CANINE	91	69	31.88%
AVIAN	4	12	-66.66%
WILDLIFE	54	34	58.82%
MISC.	22	38	-42.10%
TOTAL	738	775	- 4.77%

II. Serology

A. Brucellosis (all species) Total sera -- 19,801; 15 positive
   1. Brucellosis routine tests -- 16,726 sera; 8 positive
   2. Quarantine herd tests -- 150 sera; 2 positive
   3. Slaughter samples -- 2,905 sera; 5 positive
   4. Seminal plasma -- 20 negative

B. Brucellosis CF tests -- 64

C. Leptospirosis (all species) -- 278 sera
   1. L. pomona -- 51 positive
   2. L. hardjo -- 9 positive
   3. L. icterohemorrhagia -- 8 positive
   4. L. grippotyphosa -- 42 positive
   5. L. autumnalis -- 6 positive
   6. L. canicola -- 35 positive
   7. L. tarassovi -- 5 positive

D. Bluetongue -- 553 sera; 15 positive

E. Anaplasmosis -- 833 sera; 151 positive

F. IBR -- 211 sera; 70 positive

G. BVD -- 234 sera; 151 positive

H. PI_3 -- 114 sera; 56 positive

I. BLV -- 35 sera; negative

J. EIA -- 275 sera; negative

K. Pseudorabies -- 132 sera; slaughter samples, negative

L. Feline Leukemia Virus -- 13 sera; 10 negative

III. Rabies

A. 79 requests
   1. Human exposure
      a. 1 positive - muskrat - Flathead county
      b. 26 negative
   2. No human exposure
      a. 9 positive
         1. 1 fox -- Sheridan county
         2. 8 skunks -- Valley (4), Sheridan (2) and Judith Basin (2) counties
      b. 43 negative

IV. Bacteriology

A. Total -- 460 accessions processed resulting in 491 isolates.
B. Antibiotic sensitivities were run on 440 isolates.
C. FAT (clostridia) -- 6 bovine cases; Cl. novyii 2 cases
D. E. coli agglutination tests -- 189; 19 positive
E. 6 sets of tissues and 1 milk sample were cultured for Brucella with negative results.

V. Virology

A. Virus isolation attempts
   1. 71 bovine cases; 2 IBR
   2. 1 elk case; negative
   3. 3 porcine cases; negative
   4. 4 ovine cases; 1 BVD
B. Fluorescent antibody tests
   1. IBR -- 31; 4 positive
   2. BVD -- 85; 1 positive
   3. TGE -- 5; 3 positive
   4. PPV -- 2; negative

VI. Electron Microscopy

A. Bovine -- 65 samples; 18 rotavirus, 3 coronavirus, 1 enterovirus
B. Porcine -- 2 samples; negative
C. Ovine -- 1 sample; poxvirus
D. Canine -- 1 sample; negative

VII. Pathology -- 688 slides from 2113 tissues were examined during April.

SEROLOGIC ANALYSIS OF COMMON VIRUSES

Analysis of serum antibodies in cattle against BVD, IBR, and PI_3 at the Diagnostic Laboratory from May 1, 1981, to April 30, 1982, revealed the following:

Test	Total No. of cattle tested	No. of cattle with antibodies	Percent of cattle tested with antibodies	Titer range	Average titer
BVD	1503	1441	96%	1:4 to 1:4096	1:790
IBR	1209	1051	82%	1:2 to 1:128	1:48
PI_3	687	638	93%	1:6 to 1:486	1:191

The large percentage of cattle showing antibodies to these agents is indicative of a high exposure rate or vaccination throughout the state. From this it would be extremely difficult to make an accurate diagnosis based solely on single blood samples.

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1982
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MONTHLY LETTER

Board of Livestock

Robert G. Barthelmess, Chairman...Miles City
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Administrator
&
State Veterinarian

BRUCELLOSIS STATUS? CHANGES IN UM&R?

We have hesitated to write much on the proposed changes in the Brucellosis UM&R because of uncertainties associated with what the final product will be.

Over the past six years negotiations and conferences have been carried out between the various states, U. S. Animal Health Association, USDA and APHIS attempting to arrive at a workable modification in these Uniform Methods & Rules.

This has been a very frustrating area for the states in the West since APHIS seems to regard the West's 30 year battle to rid itself of the disease as a reason to penalize those states with more restrictions on cattle.

It seems incongruous that more stringent requirements should be placed on areas that are lightly infected while areas with heavier infection rates are allowed leniencies that are inconsistent with good disease control.

APHIS has also requested changes relating to Brucellosis in the Code of Federal Regulations that enter into intrastate matters rather than addressing only interstate movement requirements as the CFR is supposed to do.

There are numerous areas in the proposed changes that will effect Montana and it is to these points that we raise our main objections.

Montana is at the point where we have one herd under quarantine and, again, we hope that we can eliminate this infection and keep from having any more.

There will be, in the future, some changes allowable if we can maintain zero infection, but our surveillance and self-protective measures will have to be increased.

So far, the import vaccination requirement seems to be working, but it does cause some headaches, but nothing insurmountable. We feel that it is encouraging our producers to be more aware of the vaccination status of their own animals, as well as those for prospective purchase.

All of us, practitioners as well as regulatory, need to emphasize vaccination to the stockmen of Montana, since it is our only means of protection and opportunity for reexposure continues to exist through import of cattle from other areas.

Montana has joined with the other four Old West Region states in asking for a hearing before APHIS can institute these measures that will unfairly restrict these areas with a low infection rate.

As things now stand, Montana is classified as an A state, and as a result there are no substantive changes in requirements on cattle movements with

stock originating in the state. The change of ownership test is still a requirement also.

IDENTIFICATION FOR SPAYED HEIFERS

Identification of spayed heifers has long been a problem, and Montana has, for years, had the brand "S" on left and right neck of cattle recorded as an identifier for spayed heifers.

Recently four other western states (Nevada, Idaho, Wyoming, and Oregon) have recorded, or are recording, the (spade) on the jaw as an identifier for spayed heifers.

In concert with these other states, Montana Department of Livestock has also recorded the right and left jaw on cattle as an official identifier of spayed heifers.

When you spay heifers, you may use these brands to mark those cattle.

THREE MONTANA COUNTIES QUARANTINED FOR RABIES

Flathead County has been requarantined after discovery of a rabid muskrat in the Columbia Falls area. All veterinarians in the area are cautioned about the rabies problem in stray dogs and cats. Be alert!

Judith Basin County has been placed under quarantine and Dr. Ferlicka informs me that Wheatland County is now under rabies quarantine, due to a rabid dog. All practitioners in the area should be aware of the rabies problem in that county.

NEWSLETTER MAILING LIST

We have received information that some individuals may be receiving more than one copy of our newsletter. If this is the case for you, please contact the Citizens' Advocate Office at (1-800-332-2272). That office will convey this information to our office.

DIAGNOSTIC LABORATORY NEWS

By: B. Kraft
W. J. Quinn, DVM

I. Accessions received in March 1982:

	March 1982	March 1981	% change
BOVINE	525	425	23.53%
EQUINE	80	80	
PORCINE	16	20	-20.00%
OVINE	47	60	-21.66%
FELINE	30	38	-21.05%
CANINE	104	78	33.33%
AVIAN	3	9	-66.66%
WILDLIFE	17	24	-29.17%
MISC.	10	23	-56.52%
TOTAL	832	757	9.91%

II. Serology

A. Brucellosis (all species) total sera -- 25,295; 11 positive
   1. Brucellosis routine tests -- 17,227 sera; 5 positive
   2. Quarantine herd tests -- 112 sera; 1 positive
   3. Slaughter samples -- 7,932 sera; 5 positive
   4. Seminal plasma -- 24 negative

B. Brucellosis CF tests -- 21

C. Leptopspirosis (all species) --1,044 sera
   1. L. pomona -- 86 positive
   2. L. hardjo -- 36 positive
   3. L. icterohemorrhagia -- 17 positive
   4. L. grippotyphosa -- 22 positive
   5. L. autumnalis -- 8 positive
   6. L. canicola -- 27 positive
   7. L. tarassovi -- 12 positive

D. Bluetongue -- 487 sera; 7 positive

E. Anaplasmosis -- 298 sera; 2 positive

F. IBR -- 552 sera; 165 positive

G. BVD -- 566 sera; 265 positive

H. PI_3 -- 197 sera; 92 positive

I. BLV --45 sera; negative

J. EIA -- 299 sera; negative

K. Pseudorabies -- 234 sera; routine - 29 negative; slaughter - 205 negative

L. Feline Leukemia Virus -- 10 sera; 9 positive

III. Rabies

A. 45 requests
   1. Human exposure
      a. 1 positive - bovine - Daniels county
      b. 22 negative
   2. No human exposure
      a. 5 positive - skunks - Gallatin, Valley, Big Horn, Sheridan and Wibaux counties
      b. 17 negative

IV. Bacteriology

A. Total -- 564 accessions processed resulting in 399 isolates.
B. Antibiotic sensitivities were run on 301 isolates
C. FAT (clostridia) -- 10 bovine cases; Cl. novyii 1 case, 1 ovine case, negative
D. Mouse inoculation -- Clostridium perfringens Type C - 2 bovine cases, 6 negative
E. Salmonella lexington -- 1 bovine case
F. Salmonella arizonae -- 1 ovine case
G. Campylobacter fetus subs. fetus -- 2 ovine cases
H. E. coli agglutination tests -- 203; 29 positive
I. 5 sets of tissues were cultured for Brucella with negative results.

V. Virology

A. Virus isolation attempts
   1. 63 bovine cases; 1 IBR, 1 BVD
   2. 9 porcine cases; 1 undetermined
   3. 2 ovine cases
   4. 1 Bighorn sheep
B. Chlamydia isolations -- 2 cases; 1 positive
C. Fluorescent antibody tests
   1. IBR -- 84; 1 positive
   2. BVD -- 91; 4 positive
   3. Chlamydia -- 6; 1 positive
   4. PPV -- 2 negative
   5. TGE -- 5; 3 positive
   6. Rhino -- 1 positive
D. Leptospirosis culture -- 3 negative

VI. Electron Microscopy

A. Bovine -- 86 samples; 18 rotavirus, 3 coronavirus
B. Canine -- 2 samples; negative

VII. Pathology -- 832 slides from 2551 tissues were examined during March.

The diagnosis of hypomagnesemia can be extremely difficult in those instances when the only specimen available is a dead cow. While serum levels of magnesium are diagnostic prior to death, the duration of clinical symptoms is often quite brief. In order to confirm a diagnosis of grass tetany from a dead animal the following points are made.

The disease is usually observed in herds grazing lush grass pastures. Treatment of the pastures with nitrogen, ammonia and potash tend to increase the incidence of the disease. Stresses associated with spring storms, trailing or working the cows may precipitate a number of clinical cases. Blood levels of magnesium drop from a normal of 1.7-3 mg/dl to 0.5-1.0 mg/dl in clinical cases. The levels of serum calcium also drop to 5-8 mg/dl.

Recently it has been demonstrated[1] that the magnesium levels in the CSF and urine drop markedly with grass tetany. While the serum may be of no value due to hemolysis in a carcass, the CSF and urine may provide the information necessary to arrive at the diagnosis.

The workers in New Zealand associated the nervous signs of grass tetany with low levels of magnesium in the CSF as being more significant than the plasma levels of magnesium. It was further observed that these levels did not significantly change up to 12 hours post mortem. The mean level of magnesium in CSF from animals with clinical signs was 1.25 mg/dl with a standard error of 0.10 mg/dl.

It is hoped that collection of CSF and urine (when available) will help to establish a diagnosis of grass tetany. The lack of gross post mortem lesions is also consistent, but hardly specific.

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[1] Pauli, J. V. and Allsop, T. F.: Plasma and cerebrospinal fluid magnesium, calcium and potassium concentrations in dairy cows with hypomagnesemic tetany. New Zealand Veterinary Journal 22:227-231, 1974.

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NORTH DAKOTA BRUCELLOSIS TEST REQUIREMENT

Effective March 19, 1982, the Board of Livestock is dropping the requirement that cattle of North Dakota origin be negative to a brucellosis test.

This action was taken in recognition of North Dakota's freedom from brucellosis infection.

It is recommended that importers of North Dakota cattle have those cattle tested for brucellosis 45-120 days after import into Montana but this is strictly a recommendation.

Females over four months of age must still be officially brucellosis vaccinated.

CAT RABIES EXPOSURES IN IOWA -- 1981

In 1981, the number of confirmed cases of animal rabies in Iowa rose to 889--a 68% increase over the 1980 figure of 529 cases. Although skunks remain the most important endemic reservoir, a significant increase in the number of cases of rabies among dogs (49 in 1981 vs. 22 in 1980) and cats (83 in 1981 vs. 44 in 1980) was also observed. The Iowa State Department of Health was consulted on 661 animal-contact incidents, as a result of which 452 persons received postexposure therapy. Of the treated group, 57 persons received penetrating bites from known rabid animals. Forty-two (74%) of these bite-associated exposures involved cats. This species was the most common source of human exposure to rabies in Iowa in 1981, as it was in the period 1977-1980. No cases of human rabies occurred in Iowa in 1981.

NOTICE OF RULE CHANGES

There are several Administrative rule changes that are underway, so we'll take this method of notifying you of the changes.

ARM 32.3.212 - Import retest time period.
Test eligible cattle imported into Montana will be subject to brucellosis retest 45-120 days after entry into Montana. This brings Montana's requirement into agreement with the new UM&R.

ARM 32.3.251 - TB test of wild cloven-hoofed ungulates.
Due to an exposure to TB infected elk through South Dakota last fall, the Department has asked for a rule requiring TB test of wild ungulates entering the state.

ARM 32.3.223 - Research facility exemption.

An exemption is granted to research facilities in order that they might import laboratory animals, i.e., mice, hamsters, rabbits, etc., without obtaining an import permit for each shipment.

Changes in rules governing procedures for application and repeal of quarantines.

The old rule, 32.3.101 - General quarantine rule is repealed; new rules, ARM 32.3.102 through 32.3.111 are adopted that deal with:

ARM 32.3.102 - 102 - Definition
103 - Subject animals
104 - Subject diseases or conditions
105 - Supplemental quarantine provisions
106 - Quarantine, who may issue
107 - Responsibility of owner or possessor
108 - Quarantine and release of quarantine
109 - Animals in transit
110 - Breaking of quarantine
111 - Epizootic area.

The last rule is:

ARM 32.3.214 - Requiring a TB test on goats imported into the state. This requirement evidently was lost in recodification. The necessity of test arises from the fact that virtually all of the goats imported are for dairy purposes in dairies selling raw milk.

Most of this is of the housekeeping variety, in order to clean up language in the rules and eliminate vagueness and ambiguity.

HUMAN RABIES UNDER PECULIAR CIRCUMSTANCES AND NEW COUNTIES QUARANTINED

The following article from the JAVMA makes one think considerably about rabies vaccination and the procedures surrounding it.

If there was ever a testimonial against nonprofessional purchase and administration of rabies vaccine, this certainly should qualify.

Montana's rabies incidence continues to climb. Last year there were approximately 132 positive cases, roughly 85 in skunks, the rest distributed between 5 dogs, 11 cats, 3 cattle, 2 horses, 2 sheep, and 24 bats. So far this year we have had 6 positive cases, 5 skunks and one cow.

Gallatin County is the latest county to come under rabies quarantine with disclosure of a positive skunk in the Gallatin Gateway area. The following list is of the 14 counties presently under quarantine for rabies:

Big Horn	McCone
Carter	Phillips

Custer	Prairie
Daniels	Richland
Dawson	Roosevelt
Fallon	Sheridan
Gallatin	Valley

"Human rabies: Second 1981 case

The 2nd case of human rabies in the United States in 1981 occurred in a 40-year-old American man who was exposed to rabies in Mexico where he lived and who returned to Tucson, Arizona for treatment. The patient had been bitten on the right hand by his dog on June 22. The dog was immediately killed and the head shipped to the health laboratory in Hermosillo, Mexico for rabies examination. Brain tissue examined histologically with Sellers' stain revealed no evidence of Negri bodies diagnostic for rabies. Because of the laboratory report and a history of recent rabies vaccination of the dog, the man was not given rabies post-exposure prophylaxis.

The patient remained well until August 19, 58 days after the bite, when he developed paresthesia and numbness of his right hand near the site of the bite. During the next several days, he complained of fever, malaise, and aching in his right arm. On August 26, the patient was admitted to the University of Arizona Health Sciences Center with the probable diagnosis of rabies. Immediately after his admission, a neck biopsy was done, and the diagnosis of rabies was confirmed by direct fluroescent antibody testing of the tissue. Isolation of rabies virus was confirmed by mouse inoculation from a throat swab and tracheal aspirate on the 11th day of illness and from another tracheal aspirate on the 15th day of illness. Despite intensive support, his condition became complicated by bilateral bronchopneumonia, acute renal failure, hypotension, autonomic instability, and seizures. He died of respiratory and vascular collapse on September 11.

Serum and CSF collected daily for the entire period of hospitalization remained negative for rabies antibody by rapid fluorescent focus inhibition test. The histologic staining of brain material from the dog was negative for rabies, but the histologic technique (Sellers' stain) is known to give false-negative results in 10% of specimens from dogs clinically ill with rabies. Direct fluorescent antibody staining of brain material is the recommended technique. Although the dog had a history of rabies vaccination within the previous year, the patient had stored vaccine in his own refrigerator and had vaccinated the dogs himself. There is no way to determine whether the vaccine was potent at the time of delivery. Vaccines are susceptible to loss of potency through mishandling. (Emphasis supplied.)

This was the 1st case of human rabies treated with interferon in the United States. In animal studies interferon has been shown to offer protection against challenge by rabies virus only when it is administered before or shortly after virus challenge. In this case, the interferon therapy was initiated more than 2 months after exposure and other infection had occurred. Possibly the immunosuppressive effect of interferon could have been responsible for the failure to demonstrate rabies antibody in CSF or serum.--Morbidity and Mortality Weekly Report, Nov. 6, 1981: 537-538, Centers for Disease Control, USDHHS, Atlanta, Ga."

I. Accessions received in February 1982:

	February 1982	February 1981	% change
BOVINE	319	388	-17.78%
EQUINE	57	44	29.54%
PORCINE	13	26	-50.00%
OVINE	31	35	-11.42%
FELINE	27	37	-27.02%
CANINE	77	89	-13.48%
AVIAN	4	3	33.33%
WILDLIFE	12	22	-45.45%
MISC.	11	22	-50.00%
TOTAL	551	666	-17.26%

II. Serology

A. Brucellosis (all species) Total sera -- 25,758; 17 positive
   1. Brucellosis routine tests -- 17,901 sera; 14 positive
   2. Quarantine herd tests -- 51 sera
   3. Slaughter samples -- 7,788 sera; 3 positive
   4. Seminal plasma -- 18 negative

B. Brucellosis CF tests -- 35

C. Leptospirosis (all species) -- 348 sera (588 L. pomona only)
   1. L. pomona -- 36 positive
   2. L. hardjo -- 19 positive
   3. L. icterohemorrhagia -- 7 positive
   4. L. grippotyphosa -- 30 positive
   5. L. autumnalis -- 1 positive
   6. L. canicola -- 25 positive
   7. L. tarassovi -- 9 positive

D. Bluetongue -- 427 sera; 1 positive

E. Anaplasmosis -- 427 sera; 1 positive

F. IBR -- 264 sera; 122 positive

G. BVD -- 259 sera; 143 positive

H. PI_3 -- 165 sera; 53 positive

I. BLV -- 37 sera; negative

J. EIA -- 130 sera; negative

K. Pseudorabies -- 101 sera; Slaughter 101 negative

L. Feline Leukemia Virus -- 9 sera; 6 positive

III. Rabies

A. 35 requests
1. Human exposure
a. 0 positive
b. 26 negative
2. No human exposure
a. 3 positive - skunks -- Big Horn, Sheridan, and Daniels counties
b. 6 negative

IV. Bacteriology
A. Total -- 351 accessions processed resulting in 346 isolates.
B. Antibiotic sensitivities were run on 255 isolates
C. FAT (clostridia) -- 7 bovine cases; Cl. chauvoei 1 case
D. Salmonella dublin -- 1 bovine case
E. Campylobacter fetus subs. fetus -- 1 bovine case
Campylobacter fetus subs. jejuni -- 3 ovine cases
F. E. coli agglutination tests -- 87; 13 positive

V. Virology
A. Virus isolation attempts
1. 27 bovine cases; 3 IBR
2. 3 porcine cases; 2 negative, 1 undetermined
B. Chlamydia isolations
1. 4 negative (Bighorn sheep)
2. 1 positive (ovine)
C. Fluorescent antibody tests
1. IBR -- 88; 15 positive
2. BVD -- 47; 2 positive
3. Chlamydia -- 11; 1 positive
4. PPV -- 2 negative
5. TGE -- 4 negative

VI. Electron Microscopy
A. Bovine -- 44 samples; 11 rotavirus, 13 coronavirus, 1 enterovirus
B. Ovine -- 1 sample; poxvirus
C. Canine -- 4 samples; 3 parvovirus

VII. Pathology -- 549 slides from 1832 tissues were examined during February.

CRYPTOSPORIDIA

We have been routinely examining fecal samples and intestinal contents of scouring neonatal calves for the presence of cryptosporidia. The incidence has been roughly 5% with most positive calves being 10-14 days old.

Cryptosporidia is a protozoan parasite that has been associated with a transient diarrhea. The mortality rate is reportedly low.(1,2)

There has recently been a case report of cryptosporidia in veterinary students. (3)

1. Anderson, Bruce C., JAVMA, 178:9, 982 (1981)
2. Pohlenz, J. et al, JAVMA, 172:4, 452 (1978)
3. Anderson, Bruce C. et al, JAVMA, 180:4, 408 (1982)

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THE OLD ABORTION PROBLEM

With calving season comes the attendant problem of abortions. Always a problem and difficult to diagnose, abortions are a seasonal but sizable headache.

This year so far, seems to be no exception. While watching laboratory reports that are submitted by all you practitioners, it is noted that abortions from numerous causes, not many of which are unusual, have been pouring in.

There are the usual abortions attributed to IBR, some to BVD, few to vibrio, some to Lepto, pine needles, and slipping on the ice.

It is interesting to note that quite a number of Leptospiroses serologies have been requested and, through a large portion of the state, extending from northeast to southwest, a relatively high incidence of Leptospira grippotyphosa has been reported back.

In discussion with Dr. Glosser, reports of grippo in cattle in Montana have been at a very low incidence in years past, but seemingly there is an upsurge this year.

It would seem that cattle and elk are both being exposed throughout the state and a very likely vector might be the raccoon (Procyon lotor). Any of you that receive returns on Lepto that are positive for grippo might consider obtaining raccoon specimens for isolation attempts. Tissues of choice would be kidney, brain and urine (if it can be obtained by centesis immediately postmortem and inoculated into transport medium).

Throughout the state practitioners have requested serological testing for various virus diseases. Thus far there have been reports returned indicating IBR, BVD, PI_3, corona and rota virus all have been incriminated in abortion and/or neonatal deaths.

Realizing that a one point antibody titer does not a diagnosis make--it can be very helpful, when faced with abortions, etc., to consider that these high titers, especially BVD and IBR, may be indicating that there is current or recent infection or exposure. In herds with little or no vaccination for these diseases, these titers don't just grow on trees.

In my own experience, I found that these diseases were very costly, under diagnosed and ubiquitous. They have to be considered in your differential diagnosis and must be eliminated by one method or another.

Anytime you are looking at an abortion you should remember that there is still an organism that unfortunately can be involved in abortions and, astoundingly, often is not considered and this is brucellosis. All bovine bloods submitted to the lab are routinely tested for brucellosis, but it is surprising the number of submissions that are not requesting it at abortion time.

Again this year, Brucella abortus Strain 19 was cultured from an aborted fetus in our own Diagnostic Laboratory, so this also should be considered, but is a rarity.

Another of the old standbys that is not too difficult to diagnose at times but is impossible to convince an owner of, is malnutrition, also known as Montana Hollow Belly, starvation, agroceryosis, and several other pseudonyms. This can definitely lead to abortions, but due to lack of signs, will rate an undetermined from the laboratory.

Anytime that you are faced with an abortion for which you would like an etiology, remember; under the best of circumstances you are probably only going to find causes for possibly 25 - 30%.

Run through the myriad causes of abortion: genetic defects, lethal genes, malnutrition, metabolic upsets, infectious diseases, acquired toxicities, hormonal imbalances, ad infinitum, and make your differential diagnosis.

When doing that, it is important to collect appropriate tissues and bloods for laboratory testing and foremost, use your own eyes, ears, and nose as well as your accumulated knowledge and herd history applied with care while examining and diagnosing.

RABIES QUARANTINE RELEASES

Dr. Ferlicka has informed me that as of February 1, 1982, Fergus, Judith Basin, Powder River, Blaine, Hill, Rosebud, and Wibaux Counties have been released from rabies quarantine.

NOTICE

In last month's newsletter the "Compendium of Animal Rabies Vaccines, 1982" was included. We have received word that Part II of that publication was in error. Enclosed with this newsletter is a corrected copy.

OVINE ENZOOTIC ABORTION VACCINE

The Department has just received notification from USDA that Ovine Enzootic Abortion Vaccine - Vibrio Fetus Bacterin will be available through Colorado Serum Company under a special Biologics Production and Test procedure.

There have been numerous inquiries about the availability of this type vaccine from wool growers and veterinarians, also.

A firm in Idaho had made initial contact about possibilities of shipping their vaccine into the state but never followed up on the procedures that were required.

Colorado Serum Company contacted the Department and has met the required specifications and will be working with the Department on use of their product in the state.

All inquiries concerning the vaccine should be addressed to Colorado Serum Company, 4950 York Street, Denver, Colorado 80216.

Vaccine will only be permitted to be used in herds in which Chlamydial problems have been diagnosed or are at high risk through contact with affected herds.

I. Accessions received in January 1982:

	January 1981	January 1982	% change
BOVINE	260	188	-27.69%
EQUINE	40	41	2.50%
PORCINE	17	10	-41.17%
OVINE	18	17	-5.55%
FELINE	27	28	3.70%
CANINE	84	75	-10.71%
AVIAN	6	7	16.66%
WILDLIFE	20	14	-30.00%
MISC.	31	20	-35.48%
TOTAL	503	400	-20.47%

II. Serology

A. Brucellosis (all species) Total sera -- 27,774 sera; 121 positive
   1. Brucellosis routine tests -- 19,095 sera; 104 positive
   2. Quarantine herd tests -- 16 sera
   3. Slaughter samples -- 8,660 sera; 17 positive
   4. Seminal plasma -- Brucellosis -- 3 negative

B. Brucellosis CF tests -- 22

C. Leptospirosis (all species) -- 153 sera
   1. L. pomona -- 25 positive
   2. L. hardjo -- 22 positive
   3. L. icterohemorrhagia -- 6 positive
   4. L. grippotyphosa -- 14 positive
   5. L. autumnalis -- 4 positive
   6. L. canicola -- 12 positive
   7. L. tarassovi -- 7 positive

D. Bluetongue -- 388 sera; 40 positive

E. Anaplasmosis -- 464 sera; 11 positive

F. IBR -- 152 sera; 72 positive

G. BVD -- 126 sera; 102 positive

H. PI_3 -- 62 sera; 42 positive

I. BLV -- 13 sera; all negative

J. EIA -- 157 sera; 1 positive

K. Pseudorabies -- 258 sera; routine - 110 negative
   slaughter - 148 negative

L. Feline Leukemia Virus -- 8 sera; 5 positive

M. Mare Pregnancy Test -- 1 sera; negative

III. Rabies
  A. 38 requests
    1. Human exposure
      a. 1 positive - canine - North Dakota (Westby)
      b. 28 negative
    2. No human exposure
      a. 9 negative

IV. Bacteriology
  A. Total -- 216 accessions processed resulting in 158 isolates.
  B. Antibiotic sensitivities were run on 120 isolates.
  C. FAT (clostridia) 4 cases -- Cl. novyii - 2 bovine cases; 2 negative bovine cases
  D. Salmonella arizoniae -- ovine case
  E. Campylobacter fetus subs. fetus - bovine fetal stomach contents

V. Virology
  A. Virus isolation attempts
    1. 27 bovine cases; 1 positive IBR
    2. 1 ovine case; negative
    3. 1 wildlife (bighorn sheep) case; negative
  B. Fluorescent antibody tests
    1. IBR -- 41; 4 positive
    2. BVD -- 16; 1 positive
    3. TGE -- 3 negative
    4. PPV -- 4 negative

VI. Electron Microscopy
  A. Bovine - 8 cases; 2 rotavirus, 2 coronavirus
  B. Wildlife (Bighorn Sheep) - 2 cases; 1 chlamydia

VII. Pathology
  A. 446 slides from 1,318 tissues were examined during the month of January.

Compendium of Animal Rabies Vaccines, 1982

Prepared by: The National Association of State Public Health Veterinarians, Inc.
P.O. Box 13528 / Baltimore, Maryland 21203

Part II: Vaccines Marketed in U.S. - 1982

1. Vaccine, Generic Name	Produced By	Marketed By (Product Name)	For Use In*	Dosage **	Age at *** Primary Vaccination	Booster Recommended
A) MODIFIED LIVE VIRUS						
Canine Cell Line Origin	NORDEN License No. 189	Norden (Endurall-R)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
High Egg Passage, Flury Strain			Cats	1 ml	3 months	Annually
Porcine Cell Line Origin	JENSEN-SALSBERY License No. 107	Jensen-Salsbery (ERA Strain Rabies Vaccine)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
			Cattle	1 ml	4 months	Annually
			Horses	1 ml	4 months	Annually
High Cell Passage, SAD Strain			Sheep	1 ml	4 months	Annually
			Goats	1 ml	4 months	Annually
Canine Tissue Culture Origin	PHILIPS ROXANE License No. 124	Bio-Ceutic (Neurogen-TC)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
High Cell Passage, SAD Strain						
Canine Tissue Culture Origin	PHILIPS ROXANE License No. 124	Bio-Ceutic (Unirab)	Dogs	1 ml	3 months	Annually
High Cell Passage, SAD Strain						
Canine Tissue Culture Origin	PHILIPS ROXANE License No. 124	Pitman-Moore (Rabvax)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
High Cell Passage, SAD Strain						
Bovine Kidney Tissue Culture Origin	PITMAN-MOORE License No. 264	Pitman-Moore (Rabies Vaccine)	Dogs	1 ml	3 months	Annually
High Cell Passage, SAD Strain						
B) INACTIVATED VACCINES						
Murine Origin	ROLYNN License No. 266	Ft. Dodge (Trimune)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
			Cats	1 ml	3 months	Annually
Murine Origin	ROLYNN License No. 266	Ft. Dodge (Annumune)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually
Murine Origin	DOUGLAS License No. 266	Burns-Biotec (BIORAB-1)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually
Murine Origin	DOUGLAS License No. 266	Burns-Biotec (BIORAB-3)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
			Cats	1 ml	3 months	Annually
****Murine Origin	DOUGLAS License No. 266	Douglas (Pan-Rab)	Cats	1 ml	3 months	Annually
Hamster Cell Line Origin	BEECHAM License No. 225	Beecham (Rabcine)	Dogs	1 ml	3 months	Annually
High Cell Passage, Kissling Strain			Cats	1 ml	3 months	Annually
Hamster Cell Line Origin	BEECHAM License No. 225	Beecham (Rabcine-Feline)	Cats	1 ml	3 months	Annually
High Cell Passage, Kissling Strain						
Hamster Cell Line Origin	VACCINES, INC. License No. 227	Guardian (Rabies Vacc.)	Dogs	1 ml	3 months	Annually
Hamster Cell Line Origin	VACCINES, INC. License No. 227	Vaccines Specialties (Del-Rab-1)	Dogs	1 ml	3 months	Annually
Hamster Cell Line Origin	VACCINES, INC. License No. 227	Ceva (CE-RAB)	Dogs	1 ml	3 months	Annually
Hamster Cell Line Origin	JACKSON License No. 288	Schering (Rabmune)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually
Porcine Cell Line Origin	NORDEN License No. 189	Norden (Endurall-K)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually

* Refers only to the common domestic species of this class of animals.

** All vaccine must be administered intramuscularly at one site in the thigh.

*** Three months is the earliest age recommended. Dogs vaccinated between 3-12 months should be revaccinated one year later.

**** Combination vaccine.

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1982
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MONTHLY LETTER

Board of Livestock

Robert G. Barthelmess, Chairman...Miles City
Nancy Espy.....Boyes
Elmer Flynn.....Missoula
Donald L. Herzog.....Rapelje
John Kelly.....Red Lodge
Ralph J. Parker.....Fort Shaw
Robert M. Simons.....Turner

JAMES W. GLOSSER, D.V.M.
Administrator
&
State Veterinarian

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SEROLOGICAL SURVEY

In the past several weeks there have been a number of blood samples, from both cattle and elk, submitted to the laboratory from the Glasgow area for serological titration for several diseases.

There have been titers demonstrated for Leptospira grippothyphosa and L. icterohemorrhagica and L. carnicola and IBR, BVD and PI_3, as well as bluetongue in elk from those areas.

In a very limited number of cattle submissions some of the lepto titers have shown positive. In order to get a better understanding of the type and extent any problem that might be present in these species, we would like to conduct a survey where practicable.

We ask that practitioners dealing with herds that border the Missouri River and the C. M. Russel Game Range or are in nearby areas, please ask for lepto, IBR, BVD and PI_3 and bluetongue surveys on any bloods submitted to the lab.

Call me ahead of the time you send the bloods to the lab and I will arrange so that no lab changes are levied against your client. This is a disease control survey and as such there will be no charge, but only on these herds involved.

Because of the possibilities and probabilities of disease transmission between domestic and wild species using the same territory, and because there could be considerable economic impact as a result of transmission (either way), we'd like to be aware of any difficulty.

At the present, any rancher grazing cattle in that area should be made aware of the situation and should be advised to consider vaccination of his herd with multivalent lepto bacterin, especially containing grippotyphosa serotype.

RABIES QUARANTINE RELEASE

As of January 11, 1982, Carbon County has been released from rabies quarantine.

Effective January 20, 1982, rabies quarantines have been released on Garfield, Liberty, and Choteau Counties.

REREADING EARTAGS AND RETAGS

The Department has been notified by the Federal Government that their policy, that states that animals having an eartag present shall not be retagged, will be enforced from here on.

Veterinarians that retag are liable to find themselves in an accreditation violation if the practice continues. The state has no control over enforcement of this policy.

With the advent of the Department's new word processor, we are going to be better able to follow cattle movement by use of the eartag as the identifier, but complete ability to rely on it must await the entering of all available information.

At any rate, a word of caution to you all, especially the market veterinarians.

UNUSUAL RABIES EXPOSURE POSSIBILITY

January 29, 1982 Montana received word from Minnesota Department of Animal Health of the possibility of a rather bizarre rabies exposure involving calves sent from Montana.

On December 10 & 12, 1981, calves in two shipments, one each from the Drummond and Valier areas, were sent to Minnesota. On arrival in Minnesota the shipments were mixed and fed together. January 4, 1982, two calves sickened, exhibited bloody diarrhea and convulsions. One lived two days, the other a week, and on submission of specimens to the diagnostic laboratory, rabies was diagnosed.

No one on the Minnesota end paid any attention to the Montana brands, so the ranch of origin of the calves cannot be definitely established. The veterinarians involved with shipment from Montana have been notified of the danger and the Department is asking for submission of skunks from the owners' premises for survey purposes.

Caution should be taken by all Montana veterinarians in establishing differential diagnoses in cases in which rabies could be considered. In the past year, Montana has had 119 rabies cases, 71 of which have been in skunks. The march of rabies across the state now involves almost the entire eastern half.

I. Accessions received in December 1981:

	December 1981	December 1982	% change
BOVINE	282	209	-25.88%
EQUINE	25	28	12.00%
PORCINE	23	8	-61.90%
OVINE	10	7	-30.00%
FELINE	20	32	60.00%
CANINE	71	86	21.12%
AVIAN	3	5	66.66%
WILDLIFE	6	19	216.66%
MISC.	25	10	-60.00%
TOTAL	463	404	-12.74%

II. Serology

A. Brucellosis (all species) total sera -- 41,652 sera; 28 positive
   1. Brucellosis routine tests -- 30,731 sera; 14 positive
   2. Quarantine herd tests -- 296 sera
   3. Slaughter samples -- 10,623 sera; 14 positive
   4. Seminal plasma --Brucellosis -- 2 negative

B. Brucellosis CF tests -- 129

C. Leptospirosis (all species) -- 276 sera
   1. L. pomona -- 47 positive
   2. L. hardjo -- 27 positive
   3. L. icterohemorrhagia -- 17 positive
   4. L. grippotyphosa -- 17 positive
   5. L. autumnalis -- 16 positive
   6. L. canicola -- 13 positive
   7. L. tarassovi -- 1 positive

D. Bluetongue -- 394 sera; 3 positive

E. Anaplasmosis -- 433 sera; 3 positive

F. IBR -- 234 sera; 96 positive

G. BVD -- 275 sera; 172 positive

H. PI_3 -- 194 sera; 93 positive

I. BLV -- 17 sera; all negative

J. EIA -- 86 sera; 1 positive

K. Pseudorabies -- 103 sera; routine - 3 negative
   slaughter - 100; 81 negative, 19 undetermined

L. Feline Leukemia Virus -- 2 sera; 1 positive

M. Mare Pregnancy Test -- 3 sera; 2 positive

III. Rabies
  A. 47 requests
    1. Human exposure
      a. 1 positive -- skunk -- Big Horn county
      b. 23 negative
    2. No human exposure
      a. 3 positive -- skunks -- Sheridan, Fallon and Big Horn counties
      b. 20 negative

IV. Bacteriology
  A. Total -- 205 accessions processed resulting in 144 isolates.
  B. Antibiotic sensitivities were run on 110 isolates.
  C. FAT (clostridia) 8 cases; Cl. chauvoei - ovine case, Cl. novyi - ovine case, Cl. septicum - equine case, 5 negative bovine cases.
  D. Salmonella typhimurium - bovine case; Salmonella sp. - 3 bovine cases

V. Virology
  A. Virus isolation attempts
    1. 32 bovine cases
      a. IBR - 4
      b. BVD - 1
    2. 2 ovine cases - negative
    3. 5 porcine cases - negative
  B. Fluorescent antibody tests
    1. IBR -- 36; 2 positive
    2. BVD -- 55; 5 positive

VI. Electron Microscopy
  A. Bovine - 4 cases; 1 rotavirus

VII. Pathology
  A. 455 slides from 1,210 tissues were examined during the month of December.

Compendium of Animal Rabies Vaccines, 1982

Prepared by: The National Association of State Public Health Veterinarians, Inc.
P.O. Box 13528 / Baltimore, Maryland 21203

Part I: Recommendations for Immunization Procedures

The purpose of these recommendations is to provide information on rabies vaccines to practicing veterinarians, public health officials, and others concerned with rabies control. This document will serve as the basis for animal rabies vaccination programs throughout the United States. Its adoption by cooperating organizations will result in standardization of procedures among jurisdictions which is necessary for an effective national rabies control program. These recommendations are reviewed and revised as necessary prior to the beginning of each calendar year. All animal rabies vaccines licensed by the USDA and marketed in the United States are listed in Part II of the Compendium and Part III describes the principles of rabies control.

A. **VACCINE ADMINISTRATION:** It is recommended that all animal rabies vaccines be restricted to use by or under the supervision of a veterinarian.

B. **VACCINE SELECTION:** While recognizing the efficacy of vaccines with the shorter duration of immunity, the Committee recommends the use of vaccines with three-year duration of immunity because they offer the least expensive and most effective method of community rabies control.
Three-year efficacy of canine rabies vaccines was originally proven in the laboratory; subsequently, years of field experience in states such as California, North Carolina and New York, where the threat of enzootic rabies has been as great as anywhere in the U.S., have demonstrated that rabies control can be effectively and most economically maintained by implementation of a comprehensive 3-year canine vaccination program.

C. **ROUTE OF INOCULATION:** All rabies vaccines must be administered intramuscularly at one (1) site in the thigh.

D. **HIGH RISK RABIES AREA:** An area (town, city, or county) where a high incidence of rabies exists in wildlife or domestic species as determined by state health officials may be declared a High Risk Rabies Area. In such areas the public should be alerted to the risk and urged to make sure that their dogs and cats have current rabies vaccinations. State health officials may wish to consider temporarily altering revaccination schedules.

E. **WILDLIFE VACCINATION:** It is recommended that neither wild nor exotic animals be kept as household pets. Since no rabies vaccine is licensed for use in wild animals and since there is no evidence that animal rabies vaccines produce acceptable levels of immunity in wild animals, vaccination is not recommended.

F. **ACCIDENTAL HUMAN EXPOSURE TO VACCINE:** Accidental inoculation may occur in individuals during administration of animal rabies vaccine. Such exposures to inactivated vaccines constitute **no known** rabies hazard. There have been no cases of rabies resulting from needle or other exposure to a licensed modified live virus vaccine in the United States.

G. **IMPLEMENTATION OF COMPENDIUM:** It is recommended that all government agencies promptly adopt the following standard certificate and tag system. This will aid the administration of local, state, national and international procedures. Veterinary practitioners and rabies control authorities are encouraged to specify the supplying of the standardized tags and certificates when rabies vaccine is ordered. Standardized tags can sometimes help a bite victim identify the vaccination status of an animal that cannot be apprehended. Dog license tags should not conflict in shape and color with rabies tags. The schedule for shapes and colors will be repeated commencing in 1985. It is suggested that two-hole attachments be provided in tags of .064" thickness or greater. The committee recommended tag colors and shapes are:

1. RABIES TAGS:

CALENDAR YEAR	COLOR	SHAPE
1982	Orange	Fireplug
1983	Green	Bell
1984	Red	Heart
1985	Blue	Rosette

2. *RABIES CERTIFICATE:* It is recommended that veterinarians and government agencies use the NASPHV form #50, Rabies Vaccination Certificate. Vaccine manufacturers are expected to supply this form with shipments of rabies vaccine.

THE NASPHV COMPENDIUM COMMITTEE FOR 1982
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Compendium of Animal Rabies Vaccines, 1982

Prepared by: The National Association of State Public Health Veterinarians, Inc.
P.O. Box 13528 / Baltimore, Maryland 21203

Part II: Vaccines Marketed in U.S. - 1982

1. Vaccine, Generic Name	Produced By	Marketed By (Product Name)	For Use In*	Dosage **	Age at *** Primary Vaccination	Booster Recommended
A) MODIFIED LIVE VIRUS						
Canine Cell Line Origin	NORDEN	Norden			3 mos. &	
	License No. 189	(Endurall-R)	Dogs	1 ml	1 yr. later	Triennially
High Egg Passage, Flury Strain			Cats	1 ml	3 months	Annually
			Dogs	1 ml	3 mos. & 1 yr. later	Triennially
			Cattle	1 ml	4 months	Annually
Porcine Cell Line Origin	JENSEN-SALSBERY	Jensen-Salsbery (ERA Strain	Horses	1 ml	4 months	Annually
High Cell Passage, SAD Strain	License No. 107	Rabies Vaccine)	Sheep	1 ml	4 months	Annually
			Goats	1 ml	4 months	Annually
Canine Tissue Culture Origin	PHILIPS ROXANE	Bio-Ceutic (Neurogen-TC)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
High Cell Passage, SAD Strain	License No. 124					
Canine Tissue Culture Origin	PHILIPS ROXANE	Bio-Ceutic (Unirab)	Dogs	1 ml	3 months	Annually
High Cell Passage, SAD Strain	License No. 124					
Canine Tissue Culture Origin	PHILIPS ROXANE	Pitman-Moore (Rabvax)	Dogs	1 ml	3 mos. & 1 yr. later	Triennially
High Cell Passage, SAD Strain	License No. 124					
Bovine Kidney Tissue Culture Origin	PITMAN-MOORE	Pitman-Moore (Rabies Vaccine)	Dogs	1 ml	3 months	Annually
High Cell Passage, SAD Strain	License No. 264					
B) INACTIVATED VACCINES						
Murine Origin	ROLYNN	Ft. Dodge			3 mos. &	
	License No. 266	(Trimune)	Dogs	1 ml	1 yr. later	Triennially
			Cats	1 ml	3 months	Annually
Murine Origin	ROLYNN	Ft. Dodge	Dogs	1 ml	3 months	Annually
	License No. 266	(Annumune)	Cats	1 ml	3 months	Annually
Murine Origin	DOUGLAS	Bio-Ceutic	Dogs	1 ml	3 months	Annually
	License No. 266	(BIORAB-1)	Cats	1 ml	3 months	Annually
					3 mos. &	
Murine Origin	DOUGLAS	Bio-Ceutic	Dogs	1 ml	1 yr. later	Triennially
	License No. 266	(BIORAB-3)	Cats	1 ml	3 months	Annually
****Murine Origin	DOUGLAS License No. 266	Douglas (Pan-Rab)	Cats	1 ml	3 months	Annually
Hamster Cell Line Origin	BEECHAM	Beecham	Dogs	1 ml	3 months	Annually
	License No. 225	(Rabcine)				
High Cell Passage, Kissling Strain			Cats	1 ml	3 months	Annually
Hamster Cell Line Origin	BEECHAM	Beecham				
	License No. 225	(Rabcine-Feline)	Cats	1 ml	3 months	Annually
High Cell Passage, Kissling Strain						
Hamster Cell Line Origin	VACCINES, INC. License No. 227	Guardian (Rabies Vacc.)	Dogs	1 ml	3 months	Annually
Hamster Cell Line Origin	VACCINES, INC. License No. 227	Vaccines Specialties (Del-Rab-1)	Dogs	1 ml	3 months	Annually
Hamster Cell Line Origin	VACCINES, INC. License No. 227	Ceva (CE-RAB)	Dogs	1 ml	3 months	Annually
Hamster Cell Line Origin	JACKSON License No. 288	Shering (Rabmune)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually
Porcine Cell Line Origin	NORDEN License No. 189	Norden (Endurall-K)	Dogs	1 ml	3 months	Annually
			Cats	1 ml	3 months	Annually

* Refers only to the common domestic species of this class of animals.

** All vaccine must be administered intramuscularly at one site in the thigh.

*** Three months is the earliest age recommended. Dogs vaccinated between 3-12 months should be revaccinated one year later.

**** Combination vaccine.

Compendium of Animal Rabies Vaccines, 1982

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Part III: Principles of Rabies Control, 1982

These guidelines were prepared by the National Association of State Public Health Veterinarians (NASPHV) for use by government officials, practicing veterinarians and others who may become involved in certain aspects of rabies control. It is intended that the NASPHV will annually review and revise these recommendations as necessary. Standardized control procedures are needed to effectively deal with the public health aspects of rabies.

A. PRINCIPLES OF RABIES CONTROL

1. *THE DISEASE IN HUMANS:* Rabies in humans can be prevented by eliminating exposure to rabid animals and by prompt local wound treatment and immunization when exposed. Current recommendations of the Public Health Service Advisory Committee on Immunization Practices are suggested for consideration by attending physicians. The recommendations along with the current status of animal rabies in the region and information concerning the availability of rabies biologics are available from state health departments.

2. *DOMESTIC ANIMALS:* Local governments should initiate and maintain effective programs to remove strays and unwanted animals and vaccinate all dogs and cats. Such procedures in the U.S. have reduced laboratory confirmed rabies cases in dogs from 8,000 in 1947 to 247 in 1980. The recommended vaccination procedures and the licensed animal vaccines are specified in Parts I and II of the NASPHV's annually released Compendium.

3. *RABIES IN WILDLIFE:* The control of rabies in foxes, skunks, raccoons, and other terrestrial animals is very difficult. Selective reduction of these populations when indicated may be useful, but the utility of this procedure depends heavily upon the circumstances surrounding each rabies outbreak.

B. CONTROL METHODS IN DOMESTIC AND CONFINED ANIMALS

1. PRE-EXPOSURE VACCINATION

Animal rabies vaccines, because of species limitations, techniques and tolerances, should be administered only under the direct supervision of a veterinarian. Within one month after vaccination, a peak rabies antibody titer is reached and the animal can be considered to be immunized (see Parts I and II of the Compendium for recommended vaccines and procedures).

(a) DOGS

All dogs should be vaccinated against rabies commencing at three months of age, revaccinated with one of the three year vaccines one year later, and revaccinated every three years thereafter. 3-year vaccines are recommended since many dogs are not presented for vaccination annually.

(b) CATS

All cats should be vaccinated at three months of age with a rabies vaccine licensed for use in cats and be revaccinated annually thereafter.

(c) LIVESTOCK

It is not economically feasible, nor is it justified from a public health standpoint, to vaccinate all livestock against rabies. Owners of valuable animals and veterinary clinicians may consider immunizing certain breeding stock located in areas where wildlife rabies is epizootic.

(d) OTHER ANIMALS

(1). *ANIMALS MAINTAINED IN EXHIBITS AND IN ZOOLOGICAL PARKS*

Captive animals not completely excluded from all contact with local vectors of rabies can become infected with rabies. Moreover, such animals may be incubating rabies when captured. Exhibit animals, especially those carnivores and omnivores having contact with the viewing public, should be quarantined for a minimum of 180 days. Since there is no rabies vaccine licensed for use in wild animals, vaccination even with inactivated vaccine is not recommended. (Pre-exposure rabies immunization of animal workers at such facilities is recommended and reduces the need for euthanasia of valuable animals for rabies testing after they have bitten a handler.)

(2). *WILD ANIMALS AS PETS*

The public should be discouraged from keeping foxes, skunks, raccoons, bobcats, ocelots and other wild carnivores as pets since each year many of these animals which have bitten people are found to be rabid. Moreover, the AVMA and the NASPHV strongly recommend that all states enact laws to prohibit the importation, distribution and/or ownership of wild animals as pets.

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2. STRAY ANIMAL CONTROL

Stray animals should be removed from the community, especially in rabies epizootic areas. Local health department and dog control officials can enforce the pick-up of strays more efficiently if owned animals are confined or kept on leash when not confined. Strays should be impounded for at least three days to give owners sufficient time to reclaim animals apprehended as strays.

3. QUARANTINE

(a.) *International.* Present regulations (CFR No. 71154) governing the importation of wild and domesticated felines, canines, and other potential vectors of rabies are minimal for preventing the introduction of rabid animals into the United States. All dogs and cats imported from countries with endemic rabies should be vaccinated against rabies at least 30 days prior to entry into the United States. The Centers for Disease Control (CDC) are responsible for these animals imported into the United States. Their requirements should be coordinated with Interstate shipment requirements. The health authority of the state of destination should be notified within 72 hours of any animal conditionally admitted into its jurisdiction.

The conditional admission into the United States of such animals must be subject to state and local laws governing rabies. Failures to comply with these requirements should be promptly reported to the director of the CDC.

(b.) *Interstate.* Prior to interstate shipment, dogs and cats should be vaccinated against rabies according to the Compendium's recommendations and preferably shall be vaccinated at least 30 days prior to shipment. While in shipment, they should be accompanied by a currently valid NASPHV Form #50 Rabies Vaccination Certificate. One copy of the certificate should be mailed to the appropriate Public Health Veterinarian or State Veterinarian of the state of destination.

(c.) *Health Certificates.* If a certificate is required for dogs and cats in transit, it must not replace the NASPHV rabies vaccination certificate.

4. ADJUNCT PROCEDURES

Methods or procedures which enhance rabies control include:

(a) *Licensure.* Registration or licensure of all dogs and cats may be used as a means of rabies control by controlling the stray animal population. Frequently a fee is charged for such licensure and revenues collected are used to maintain a rabies or animal control program. Vaccination is usually recommended as a prerequisite to licensure.

(b) *Canvassing of area.* This includes house-to-house calls by members of the animal control program to enforce vaccination and licensure requirements.

(c) *Citations.* These are legal summones issued to owners for violations including the failure to vaccinate or license their animals.

(d) *Leash Laws.* All communities should adopt leash laws which can be incorporated in their animal control ordinances.

5. POST-EXPOSURE

ANY DOMESTIC ANIMAL THAT IS BITTEN OR SCRATCHED BY A BAT OR BY A WILD, CARNIVOROUS MAMMAL WHICH ISN'T AVAILABLE FOR TESTING SHOULD BE REGARDED AS HAVING BEEN EXPOSED TO A RABID ANIMAL.

(a) When bitten by a rabid animal, unvaccinated dogs and cats should be destroyed immediately. If the owner is unwilling to have this done, the unvaccinated animal should be placed in strict isolation for six months and vaccinated one month before being released. Dogs and cats that are currently vaccinated should be revaccinated immediately and leashed and confined at home for 90 days.

(b) *Livestock.* All species of livestock are susceptible to rabies infection; cattle appear to be among the most susceptible of all domestic animal species. Livestock known to have been bitten by rabid animals should be destroyed (slaughtered) immediately. If the owner is unwilling to have this done, the animal should be kept under very close observation for six months.

Regarding the management of livestock exposed to rabid animals, the following recommendations and considerations are suggested:

(1) The exposed animal can be safely killed and its tissues eaten without risk of infection if the animal is slaughtered within seven days after being bitten. Persons who slaughter and skin an exposed animal should wear gloves and perform their duties with care to prevent possible exposure from the wound area. Liberal portions of the tissues in the area of the bite should be discarded. The remaining muscle tissues of the animal are considered safe to eat.

(2) No tissues or secretions from a clinically rabid animal should be used for human or animal consumption; however, pasteurization temperatures will inactivate rabies virus. Therefore, drinking pasteurized milk or eating meat that has been completely cooked from a rabid animal does not constitute a rabies exposure.

C. CONTROL METHODS IN WILD ANIMALS

1. Terrestrial Mammals

Since there is no evidence that these costly programs reduce either wildlife reservoirs or rabies incidence on a statewide basis, persistent, continuous and routine trapping or poisoning campaigns as a means of wildlife rabies control should be abolished. However, limited control in high contact areas (picnic grounds, camps, suburban areas) may be indicated for the removal of selected high risk species of wild animals. The public should be warned not to handle wild animals. The state game department should be consulted early to manage any elimination programs when requested to do so by the state health department.

2. Bats

Rabid bats have been reported from every state except Hawaii, and they have been the source of rabies infection for at least ten human cases of rabies in the United States. It is neither feasible nor practical, however, to control rabies in bats by areawide bat population reduction programs.

Bats should be eliminated from houses and surrounding structures to prevent direct association with people. Such structures should then be made bat-proof by sealing routes of entrance with screen or other means.

A person bitten by a bat or any wild animal should immediately report the incident to a physician or hospital emergency room which will evaluate the need for antirabies treatment (see current Rabies Prophylaxis Recommendation of the Public Health Service Advisory Committee on Immunization Practices). Bats and other wild carnivorous mammals that bite people should be killed and sent to the laboratory for examination for rabies.

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JAMES W. GLOSSER, D.V.M.
Administrator
&
State Veterinarian

DR. PAUL N. HOLCOMB, RETIRING

Dr. Paul N. Holcomb (Texas '52) is retiring effective February 8, 1982. Originally from Terrell, Texas, he obtained his D.V.M. from Texas A & M and after a short period in practice in that state, he moved to Oregon and a small animal practice.

In 1954, Paul joined the old USDA Bureau of Animal Industry and reported to Shelby, Montana the 15th day of September. He has told me that driving through the Missouri River Canyon near Wolf Creek, he and his family hit a snowstorm and they asked each other what they were doing in that part of Siberia.

During the statewide brucellosis area test days, he worked in a variety of locations pursuing duties as a field veterinary medical officer. Always an innovative thinker in the field of animal disease, Paul has been involved in a number of interesting assignments.

During the early sixties he coordinated and conducted brucellosis testing and survey work, in Yellowstone Park involving elk and bison, for the USDA and Department of Interior. At a later period, he spent several months in Alaska, again working with brucellosis, but this time in the caribou herds.

In 1974, Dr. Holcomb was designated as the Station Brucellosis Epidemiologist for Montana and has lent his considerable experience in the modifications, innovations, and changes that have been instituted in Montana's brucellosis program since that time.

He has been active in animal disease control in Montana and has served as a very vital source of information and help to the practicing veterinarians of the state.

A long time member of the Montana Veterinary Medical Association, Dr. Holcomb served on its Executive Board and as President in 1974-75. During his very active tenure as president, the Montana Veterinary Practice Act was changed in the 1975 legislative session under his guidance.

Dr. Holcomb has been a veritable cornerstone upon which the veterinarians of the state and the Department of Livestock have leaned heavily.

We will miss him mightily but wish him well and much happiness in pursuit of retirement. All that hunting and fishing can't be good for a guy!

RESULTS OF NEWSLETTER SURVEY

As I said a month or so ago, we have been tabulating the results of our survey ordered by the Governor's office on all newsletters.

So far, out of 450 recipients of the newsletter 240 have sent in replies, which works out to 53%. I believe that is a good response to any survey.

The questions:

1. Concerning technicality of articles: Three said they were too technical, nine said they were too general, one said excellent (which I thought was from a very discerning reader), one said be more objective (glad he, she, or it is in the minority since I've never particularly tried to be objective), and the rest said it was "about right".

2. Frequency of mailing: Most said monthly but about an equal split was evident between bimonthly and quarterly, both of which lagged far behind monthly. The same sorehead only wanted it yearly.

3. Retention on the mailing list: Three malcontents wanted off the mailing list and everyone else in the elite reading public asked to stay on.

There have been quite a number of suggestions for content and we have those listed and they will be used for ideas in drafting articles. It will take some time and headwork in order to make some suggestions workable, but we will sure give it a try.

One other request, which I'll repeat, is that anyone that has an unusual, noteworthy, outstanding, or otherwise interesting case history, practice tip, etc., please write, wire, or call me and we'll sure try to incorporate it into some month's epistle.

There are numerous times and occurrences when we all look at the things at hand and regard them as so routine that they don't need mention, and we don't stop to think that to the bloke down the road a piece, this is a highly unusual situation.

It reminds me that once in my practice career I diagnosed and treated a case of eclampsia in a queen, and though it was my first, I assumed all the small animal practitioners saw many such cases a year.

I was amazed to read in a blurb in the AVMA Journal a month or two later that the second reported case of eclampsia in the queen had been documented. (I have subsequently talked to a number of veterinarians who were just like me, treated one or more cases in queens but assumed it was routine.)

At any rate, I could and will try to use any of the suggestions.

Small animal articles by and large will be somewhat limited, both because of this writer's limited claim to expertise in that field, and that this Department has little small animal contact, except for zoonoses and small animal problems as they effect livestock.

One respondent (that lives in Malta but who shall remain nameless) said that he thought I was too corny. Knowing his warped sense of humor, I ignored the comment. I found during my years as a solo large animal practitioner (these last four words are a direct indication of a level of intelligence), that if you didn't glean a few of the humorous or ludicrous moments in life, the pay was pretty poor.

The parting shot concerns the return address of our survey cards. Our secretarial staff stamped the Department's address on both sender and receiver spots, since we felt this was to be a blind survey. There were a number of acerbic remarks made about "how were we supposed to know who wrote what" if we didn't leave a space for you to write your name.

If we had left the sender return blank, we would have been blamed for wanting everyone to incriminate themselves with their opinions and identification.

Happy New Year and take this is in the vein in which it was intended.

RABIES QUARANTINE

Dr. Ferlicka has notified me that Toole County and Glacier County have been removed from the rabies quarantine list as of January 1, 1982.

TUBERCULOSIS IN ELK

Recently Montana became involved in the issue of communicable diseases in privately owned game and exotic animals. Two game farms had received elk from another game farm that had earlier received elk that possibly originated from a herd in South Dakota in which tuberculosis was diagnosed.

Initially a diagnosis of tuberculosis was made in a herd of privately owned elk after unusual death loss. In the course of the epidemiology, the secondary contact with Montana was determined, and we were notified.

This Department then tested all animals owned by one game ranch and all but about 45, that are still to be tested on the other. All animals, elk as well as a number of exotics, were tested and found to be negative.

Because of possibilities of introduction of infection by this route, an emergency rule was promulgated to require TB test on all cloven hoofed ungulates imported into Montana. A regular rule will be sought at the end of the 120 day emergency rule period.

It would be helpful if any practitioner having game farm owners as clients would inform clients or remind them that these tests are required when importing animals.

Elk, bison, and other bovidae are subject to brucellosis tests also.

DR. STEPHEN P. BACHMANN - 1947 - 1981

Dr. Stephen P. Bachmann, 34, of Roundup was killed in an automobile accident December 11, 1981. Dr. Bachmann was a California native born at Visalia, educated at Woodlake, Visalia and the University of California.

He was graduated from the Veterinary School, University of California, Davis, in 1973. He had engaged in large animal medicine in several locations in South Dakota between 1973 and 1976. He practiced in Goldendale, Washington; Chadron, Nebraska, and Caldwell, Idaho between 1976 and 1979, when he came to Roundup.

He is survived by his parents, the Henry Bachmann's of Woodlake, California.

Our sympathies to the family.

CHANGES IN ADMINISTRATIVE RULES

You are receiving copies of two changes proposed for Administrative Rules, one of which pertains to brucellosis and the other to general quarantine provisions.

The brucellosis rule only addresses the change in retest time requirement, from a 30-60 day period to a 45-120 day period.

This brings our rule and law into compliance with the UM&R.

The other change organizes, solidifies, etc., the provisions for quarantine of disease and provisions for release.

ANNUAL VETERINARY SPRING CONFERENCE
March 18-20, 1982
Washington State University

Contact Barbara Robbins, College of Veterinary Medicine, Office of Student Services, 130 Veterinary Science Building, Pullman, Washington 99164; (509) 335-1531.

CATTLE - EXPOSED OR QUARANTINED HERDS

The following states will not accept animals from brucellosis infected, exposed, or quarantined herds regardless of their vaccination status:

STATE	EFFECTIVE
Alabama	December 10, 1981
Indiana[1]	December 7, 1981
Maine[2]	Immediately
Michigan	Immediately
Minnesota[3]	December 30, 1981
New Hampshire[2]	Immediately
New Jersey	Immediately
North Carolina[2]	
Vermont[2]	Immediately
Washington[2]	Immediately

1 - Including all progeny

2 - Except for immediate slaughter

3 - Cattle may be sent directly to slaughter or to the public stockyards at South St. Paul with an interstate shipping permit.

I. Accessions received in November 1981:

	November 1981	November 1980	% change
BOVINE	130	153	-15.03%
EQUINE	32	28	14.28%
PORCINE	11	18	-38.88%
OVINE	14	5	180.00%
FELINE	29	13	123.08%
CANINE	63	67	-5.97%
AVIAN	7	8	-12.50%
WILDLIFE	23	14	64.28%
MISC.	19	25	-24.00%
TOTAL	328	331	-0.91%

II. Serology

A. Brucellosis (all species) Total sera -- 30,771 sera; 2 positive
   1. Brucellosis routine tests -- 21,842 sera; 1 positive
   2. Quarantine herd tests -- 179 sera; 2 suspect
   3. Slaughter samples -- 8,735 sera; 1 positive
   4. Seminal plasma -- Brucellosis -- 15 negative

B. Brucellosis CF tests -- 26

C. Leptospirosis (all species) -- 729 sera (627 L. Pomona only)
   1. L. pomona -- 42 positive
   2. L. hardjo -- 28 positive
   3. L. icterohemorrhagia -- 32 positive
   4. L. grippotyphosa -- 19 positive
   5. L. autumnalis -- 9 positive
   6. L. canicola -- 3 positive

D. Bluetongue -- 1,020 sera; 31 positive

E. Anaplasmosis -- 990 sera; 23 positive

F. IBR -- 175 sera; 76 positive

G. BVD -- 178 sera; 95 positive

H. PI_3 -- 124 sera; 32 positive

I. BLV -- 9 sera; 1 positive

J. EIA -- 256 sera; 9 positive

K. Pseudorabies -- 132 sera; Routine - 9 negative
   Slaughter - 123 negative

L. Feline Leukemia Virus -- 5 sera; 2 positive

M. Mare Pregnancy Test -- 6 sera; 1 postive

III. Rabies

A. 62 requests
   1. Human exposure
      a. 1 positive -- bat -- Jefferson county
      b. 39 negative
   2. No human exposure
      a. 3 positive -- skunks -- Valley, Daniels and Prairie counties
      b. 19 negative

IV. Bacteriology
   A. Total -- 159 accessions processed resulting in 113 isolates.
   B. Antibiotic sensitivities were run on 100 isolates.
   C. FAT (clostridia) -- 7 cases; Cl.novyii (2 bovine cases); Cl.septicum (bovine) 2 negative bovine cases and 2 negative ovine cases
   D. Salmonella dublin -- 2 bovine cases
   E. Campylobacter fetus isolated from bovine fetal stomach contents

V. Virology
   A. Virus isolation attempts
      1. 18 bovine cases
         a. 1 IBR
         b. 2 BVD
         c. 4 PI_3
      2. 12 porcine cases -- all negative
   B. Fluorescent antibody tests
      1. IBR -- 4 negative
      2. BVD -- 20 negative, 1 positive
      3. TGE -- 2 negative
      4. PPV -- 1 negative

VI. Electron Microscopy
   A. Bovine -- 3 cases; 1 positive rotavirus
   B. Ovine -- 1 case; poxvirus

VII. Pathology
   A. 324 slides from 859 tissues were examined during the month of November.

SYNOPSIS OF BRUCELLOSIS MOVEMENT REQUIREMENTS

On January 1, 1982, new brucellosis program provisions regarding the classification of states and requirements for movement of cattle were scheduled to go into effect. USDA has temporarily delayed the effective date for the proposed changes in the brucellosis program due to the receipt of a large number of comments. This report provides the most significant changes regarding the brucellosis program.

Increased restrictions in the movement of all classes of cattle (feeding, slaughter, and breeding) will result once the state classification system is in effect. The severest restrictions in cattle movement will occur in the states with the higher incidence of brucellosis infected herds (B and C states). In these areas producers should be aware of the advantages of total calfhood vaccination and certified brucellosis-free herd programs available to them.

1. The premovement test requirements are reduced for officially vaccinated cattle.

2. All classes of cattle from certified brucellosis-free herds are exempt from premovement testing or other restrictions if herd identity is maintained. This includes breeding, feeding, and slaughter classes of cattle.

For initial certification of a herd, a producer must have performed at least two consecutive negative blood tests of all test-eligible cattle not less than 10 months nor more than 14 months apart. Once the herd has been recognized as a certified free herd, a negative blood test of all test-eligible cattle must be performed within 60 days of each anniversary date to continue this certification. The free movement of this class of cattle without testing requirements should make this feasible for many operators in areas of high incidence of brucellosis.

BRUCELLOSIS PROGRAM REQUIREMENTS FOR MOVEMENT OF TEST - ELIGIBLE CATTLE[1]

Zero Status

Free of Infection

1. Feeding
   a. Into quarantined feedlots or pastures. (not allowed in Zero states.)
      (1) Exposed cattle[2] - "S" brand and permit before movement. May move to quarantined facility in A, B, or C states.
      (2) Cattle from other herds may move to quarantined feedlots in A, B, or C without test but with health certificate.
   b. Into other feedlots - same as breeding cattle.
2. Immediate slaughter (inter or intrastate)
   a. Exposed animals - "S" brand or "B" brand, if depopulated, or moved in sealed vehicle and permit.
   b. Other cattle may move without restriction but identified to source.
3. Breeding cattle - No test but health certificate for interstate. 45-120 day post movement test recommended.

Class A Status

Less Than .2S% (2.5 herds/1000) infected.

1. Feeding
   a. Inter or intrastate into quarantined feedlots or pastures. (not allowed in Zero states)
      (1) Exposed cattle - "S" brand and permit before movement.
      (2) Cattle from nonquarantined herds may move inter or intrastate to quarantined feedlots or pastures without test, must have health certificate for interstate.
   b. Into other feedlots - same as for breeding cattle.
2. Immediate Slaughter
   a. Exposed cattle - "S" brand or moved in sealed vehicle and permit.
   b. Other cattle may move without restriction but must be identified to source.
3. Breeding cattle
   a. Intrastate - no test required; 45-120 day post movement test recommended.
   b. Interstate - test within 30 days with health certificate, 45-120 day post movement test recommended.
   c. Official Calfhood Vaccinates under 12 months of age from infected herds with an approved herd plan may move without restriction until January 1, 1983.

Class B Status

Less Than 1.5% (15 herds/1000) infected.

1. Feeding
   a. Inter or intrastate into quarantined feedlots or pastures (not allowed in Zero states)
      (1) Exposed cattle - "S" brand and permit before movement.
      (2) Cattle from nonquarantined herds test within 30 days before movement.
   b. Into other feedlots - same as breeding cattle.
2. Immediate slaughter
   a. Exposed cattle "S" brand or moved in sealed vehicle and permit.
   b. Cattle from nonquarantined herds - may move directly to slaughter or market without "S" brand; must move from livestock markets with "S" brand or in sealed vehicle and permit.
   c. Cattle from dealer concentration points - "S" brand or moved in sealed vehicle and permit.
3. Breeding cattle
   a. Cattle from other nonquarantined herds
      (1) Intrastate - negative test within 30 days with 45-120 day post movement test recommended.
      (2) Interstate - negative test within 30 days with 45-120 day post movement test required.
   b. Official Calfhood Vaccinates under 12 months of age from infected herds with an approved herd plan may move without restriction until January 1, 1983.

Class C Status

More Than 1.5% (15 herds/1000) infected.

1. Feeding
   a. Inter or intrastate into quarantined feedlots or pastures. (not recognized in Zero states)
      (1) Exposed cattle - "S" brand and permit before movement.
      (2) Cattle from nonquarantined herds - test within 30 days before movement.
   b. Into other feedlots - same as breeding cattle.
2. Immediate Slaughter
   a. Exposed cattle - "S" brand or moved in sealed vehicle and permit.
   b. Cattle from nonvaccinated herds may move directly to slaughter or market without "S" brand; must move from livestock market with "S" brand or in sealed vehicle and permit.
   c. Cattle from dealer concentration points; "S" brand or moved in sealed vehicle and permit.
3. Breeding cattle
   a. Cattle from nonquarantined herds may move intrastate with one negative test within 30 days of movement which may be conducted at the market. The 45-120 day retest is strongly recommended.
   b. Vaccinated cattle from nonquarantined herds for interstate: one negative test within 30 days and quarantine and retest 45-120 days post movement. A permit for entry from the receiving state is required.
   c. Nonvaccinated cattle from nonquarantined herds - for interstate: 2 negative tests. 1st test valid 12 months; 2nd not more than 30 days prior to movement. Cattle must have been held separate. If first test was the entire herd, the time for the 2nd test can be extended to 12 months. Second test may be done at the market. Quarantine and retest 45-120 days post movement. A permit for entry from the receiving state is required.
   d. Official Calfhood Vaccinates under 12 months of age from infected herds with an approved herd plan may move without restriction until January 1, 1983.

1 - test eligible cattle are all bulls and cows except:

a - steers and spayed heifers from any herd.
b - official calfhood vaccinates of dairy breeds under 29 months of age which are not parturient or post-parturient.
c - official calfhood vaccinates of beef breeds under 24 months of age which are not parturient or post-parturient.
d - nonvaccinated cattle less than 12 months of age from nonquarantined herds.

2 - exposed cattle are: animals that are part of a known infected herd or that have been in contact with brucellosis reactors in marketing channels for periods of 24 hours or periods of less than 24 hours if the reactor has recently aborted, calved, or has a vaginal or uterine discharge are considered to be exposed regardless of the blood test results and must be placed under quarantine and restricted pending slaughter or testing after return to herd of origin.